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Complete system of
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Washington

1920

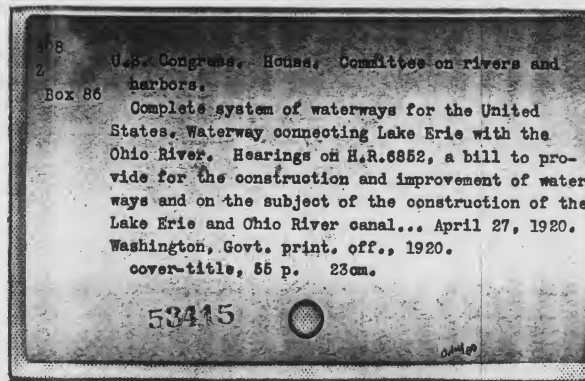
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COMPLETE SYSTEM OF WATERWAYS FOR THE UNITED STATES
WATERWAY CONNECTING LAKE ERIE WITH THE OHIO RIVER

HEARINGS

ON

H. R. 6852

A BILL TO PROVIDE FOR THE CONSTRUCTION
AND IMPROVEMENT OF WATERWAYS

AND ON THE SUBJECT
OF THE

CONSTRUCTION OF THE LAKE ERIE AND OHIO RIVER CANAL

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES
SIXTY-SIXTH CONGRESS

CONSISTING OF

CHARLES A. KENNEDY, Iowa, *Chairman*.

PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.
NATHAN L. STRONG, Pennsylvania.
NIELS JUUL, Illinois.
AMOS H. RADCLIFFE, New Jersey.
ANDREW J. HICKEY, Indiana.
CALEB R. LAYTON, Delaware.

ISRAEL M. FOSTER, Ohio.
EARL C. MICHENER, Michigan.
JOHN H. SMALL, North Carolina.
CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRE, Louisiana.
CLARENCE F. LEA, California.
WILLIAM E. CLEARY, New York.

JOSEPH H. MCGANN, *Clerk*.
ROSE FRENCH, *Assistant Clerk*.

APRIL 27, 1920

WASHINGTON
GOVERNMENT PRINTING OFFICE
1920

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COMPLETE SYSTEM OF WATERWAYS FOR UNITED STATES—
WATERWAY CONNECTING LAKE ERIE WITH OHIO RIVER.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Washington, D. C., Tuesday, April 27, 1920.

The committee met at 11.30 o'clock a. m., Hon. S. W. Dempsey, presiding.

Mr. DEMPSEY. Now, I understand, gentlemen, there is another hearing this morning.

STATEMENT OF HON. GUY E. CAMPBELL, A REPRESENTATIVE IN
CONGRESS FROM THE STATE OF PENNSYLVANIA.

Mr. CAMPBELL. Mr. Chairman, I will be glad to have you give us a hearing on H. R. 6852. I am the author of the bill and introduced it in the House on June 28, 1919, and I have prepared a statement which I would ask the privilege of making a part of the hearings, with the permission of the chairman.

Mr. DEMPSEY. That may be placed in the hearings.

(The paper referred to follows:)

STATEMENT BY HON. GUY E. CAMPBELL, OF PENNSYLVANIA, ACCOMPANYING HOUSE OF REPRESENTATIVES BILL NO. 6852, INTRODUCED BY HIM IN FIRST SESSION OF SIXTY-SIXTH CONGRESS, JUNE 28, 1919.

I have introduced this bill appropriating \$100,000,000 a year for five years to provide a complete system of waterways for the entire Nation in that period at the instance of the Mississippi to Atlantic Internal Waterways Committee, of which William H. Stevenson, of Pittsburgh, is chairman. This committee was created by a great convention held at Pittsburgh January 7 and 8 last, which adopted resolutions which now take concrete form in this bill.

The measure is intended to make effective the most important feature in a great reconstruction for peace program which the Nation should undertake without further delay. Its object is not only to greatly relieve, improve, and increase our transportation facilities, thus expediting deliveries, preventing coal, ore, and food shortage and enhanced prices and suffering and decreased manufacturing, agricultural, and mining output, but also to provide employment at fair wages for many thousands of returned soldiers and others.

It is unfortunately too true that our National, State, county, and municipal governments have thus far done little or nothing to meet the after-war conditions now crowding for solution. Our people everywhere have rightly been extending warm welcomes to our gallant returning soldiers, but thus far little effort has been made to show our real gratitude by taking measures which will insure such of those brave men who may need it steadily and remunerative employment. They come back to a country in which prices are much higher than when they left, and those who are without ample means or properly paid work must inevitably incur suffering for themselves and their families unless the Government, the States, the counties, and the cities give prompt and efficient aid in providing proper employment.

We have been, and still are, sending billions of dollars to Europe to help support the peoples there and uphold their countries. France, Italy, and England have already acted to provide employment or support for their returned soldiers and we alone have done nothing. Italy has a program for spending \$500,000,000 for reconstruction work, principally on waterways and roads. Our own National Government should set the example in this line, and the States, counties, and cities should follow. I am glad to say that my own State of Pennsylvania has appropriated \$50,000,000 for good roads. It is rightly felt, however, that because the Federal Government has absorbed so many sources of revenue it should do much which formerly was assumed by States and localities.

We know the bitter experience the country had during the last three years because of lack of sufficient transportation facilities. It is estimated that for lack of such facilities our people have had to pay as high as \$20,000,000,000 in enhanced prices and reduced manufacturing output and trade, to say nothing of the suffering caused from cold due to shortage of coal and privation resulting from shortage of many articles and the boosting of prices beyond the means of many. In January, 1918, there were 418 vessels in New York harbor held for a considerable period because of lack of fuel and cargoes which could have easily and promptly been supplied if the Ohio River had been properly improved and the Lake Erie & Ohio River Canal and the New York Barge Canal been in operation.

In the fall of 1917 the great Northwest suffered for lack of 6,000,000 tons of coal which it would have had months before had the Ohio River and the Lake Erie & Ohio River Canal been in operation. To supply this need it was necessary to use 50 per cent of the freight cars of 47 railroads for many weeks and later to utilize them to make up an iron-ore shortage. The result was the whole rail system of the country was upset; communities in every part of the country suffered from lack of goods and food; manufacturing, mining, and building were curtailed; and prices of everything vastly enhanced. The cost, as I have said, for three years has been \$20,000,000,000. Had one-fourth of that sum been expended in time on our waterways the greater part of this cost and all the suffering and inconvenience would have been saved.

Now, the immediate future holds for us the same menace. As soon as business becomes normal and prosperous our railroads will experience the greatest congestion in their history and our national losses will soon mount into many billions because thereof. Already a coal shortage this winter is predicted and people are urged to lay in their fuel now, when it is alleged that it can be transported, and not wait until later, when there will be no sufficient supply of cars or coal. If ample transportation by water, as well as by rail, were provided there would in the future be no danger of coal shortages, which are not due to lack of either coal or miners. If there were sufficient transportation then miners would be given work six days a week instead of, as is frequently the case, only two or three days. They would not, therefore, be compelled to leave the mines and seek work in other industries or go to Europe, as many are now doing, to find constant employment.

The one great remedy is to improve our waterways, as indicated in this bill; to make our railroads as efficient as possible and to properly improve our great trunk roads or highways. Transportation facilities of the right kind are a most essential foundation for all great business prosperity. By building and improving our waterways and roads we will in the end furnish employment for all our soldier and other surplus labor not only on these public works, but in the private enterprises which will be stimulated by the increased transportation facilities.

We can make a nation-wide system of waterways and roads by the expenditure of \$200,000,000 annually for five years. We have actually sunk more than \$200,000,000 a year for two years upon the railroads and have loaned them in addition several times that amount. Less than half the amount given or loaned the railroads would give us a waterway system that would yield much greater transportation relief. Fifteen years ago James J. Hill said that \$500,000,000 expended in five years on our waterways would yield a greater relief to the railroads and the public than \$5,500,000,000 spent on the railroads and the past two years' experience has proved that he was right.

We must have cheaper and more regular transportation if we are going to compete properly for foreign trade. We can not hope to send much of our interior food and manufactured products abroad unless we can get cheap water transport to the Atlantic, Gulf, and Pacific ports. It is useless to build a great ocean marine if it can not get fuel and cargoes. Great Britain is already

planning to take all of Germany's great foreign steel trade, and she can do it unless we get cheaper transportation internally for our own steel.

I know there is much talk of retrenchment, and that is all right in certain directions. But in some cases it would be a penny wise and pound foolish policy. We have saved \$15,000,000,000 which we were going to spend this year for war purposes. Why not spend \$500,000,000 of that sum in five years for peace purposes—for water transportation and, if necessary, as much more for roads, and thus give our people work and cheaper living and enable them to secure billions of dollars of foreign trade they would otherwise lose?

If we fail to do this in the next few years we will lose another \$20,000,000,000 in increased prices, decreased production, and loss of foreign trade. We also are likely to have multitudes of men out of employment and hungry. This is what has bred bolshevism abroad and it will also breed great discontent here. Let us therefore get busy at once in preparing to meet and solve the great problems of peace which now confront us. We were not prepared for war and this fact cost us billions of dollars. Let us now prepare in time for peace and save billions. I solemnly declare that there can be no more vital act to that end than the making of this bill a law without delay. It covers the whole land; it is not a sectional measure; it provides transportation facilities for the whole Nation and I ask for it the support of Members of Congress from everywhere. It will help the farmer as much as the manufacturer, the consumer as well as the producer, the workman as well as the business man, the individual as well as the whole people. It will help make everyone busy, reduce the cost of living and prevent suffering. I appeal to the friends of all worthy waterway projects to unite upon this bill, which cares for all such projects. It is time for them to cease to urge only their own pet schemes. Like the members of the Continental Congress at the time of the great Declaration, the time has come for all the waterways men to hang together or they and their projects will hang separately.

By the expenditure of the \$500,000,000 asked for in this bill the Government will provide for carrying quickly and cheaply in a few years 500,000,000 tons a year on our internal waterways, and also aid our great ocean and Gulf harbor commerce. The saving on the internal commerce rates will directly reach at least \$250,000,000 a year, to say nothing of the other great benefits that will result in the way of decreased prices, increased manufacturing and agricultural output and enhanced foreign trade. We have authorized the War Finance Corporation to issue \$1,000,000,000 of bonds and \$500,000,000 of stock to assist in increasing our foreign trade, but greater results in this line would be achieved by the expenditure of less than one-third this amount on our waterways.

That this is not an exaggerated view is shown by the fact that the canalized Monongahela River, bordering my district, in 1917 and 1918 carried 25,000,000 tons of coal, at a saving of \$10,000,000 as compared with rail rates, and 6,000,000 tons of other material, at a saving of about \$4,000,000, or a total of \$14,000,000, which was over twice the whole amount expended by the Government on the river thus far.

But this was not by any means the greatest result. The coal carried on the river kept Pittsburgh's greatest industries going and enabled them to turn out vast quantities of the munitions which helped shorten the war and this coal would not have been produced had there been no water transportation for it. The traffic on the canalized Monongahela last year was 16,000,000 tons, and is rapidly increasing. Last April coal was carried on it for 12.9 cents a ton, while the rail charge was 80 cents. Great as this traffic was, it is small as compared with that which will use the fully improved Ohio River and the proposed Lake Erie & Ohio River Canal, for which it is estimated a traffic of 90,000,000 tons is already available.

European countries are already improving their waterways and planning new ones. Manchester, England, is advertising in this country the advantages of our shippers using its great canal. London is planning great port improvements. So are Antwerp, Paris, and Russian, Italian, and German river and harbor cities. We in this country are planning to take over the Cape Cod and the Chesapeake & Delaware Canals. But no internal waterway—not even the Suez, Panama, Kiel, Manchester, or New York Barge Canal, nor in fact all of these waterways combined—will have the traffic that will flow from the Mississippi Valley up the Ohio River and through the proposed Lake Erie & Ohio River Canal, which is provided for in this bill, and which will connect up 35 States and Canada by a continuous waterway extending from New Orleans to Cincinnati, St. Louis, the Great Lakes cities, New York Harbor, and the whole Atlantic coast. Under the provisions of this bill a further great extension of

waterways service could be made by the improvement of the tributaries of the Mississippi, Missouri, and Ohio, such as the Arkansas, Red, Cumberland, Tennessee, Miami, Muskingum, Scioto, Allegheny, Monongahela, and Youghiogheny Rivers, on recommendation of the United States Engineers, the proper executive officials, and Congress.

The enactment of this bill will prove popular with our more than 2,000,000 soldiers who served in Europe and saw the vast value of the waterways in war as well as in peace. For they know it will not only give many of them employment, but that it will greatly promote the trade and permanent prosperity of the country. Therefore I appeal for the prompt passage of this measure as a matter of vital and pressing national importance.

GUY E. CAMPBELL, M. C.

Mr. CAMPBELL. I wish to say that we have here a number of representatives representing the several waterways organizations throughout the country. Mr. Stevenson, of Pittsburgh, chairman of the Lake Erie and Ohio River Canal Board, and the Mississippi to Atlantic Internal Waterways Committee, is detained in Atlantic City attending a meeting of the Chamber of Commerce of the United States.

Mr. DEMPSEY. We have a telegram also from Mr. Hypes, president of the Clinton Commercial Club, saying they desired to be represented here, but were detained for some reason.

Mr. CAMPBELL. What I wish to say is preliminary and as a further statement in addition to the one prepared and sent out, that our past experience during the war and at the present time is that traffic throughout the country is practically tied up. Pittsburgh is in bad shape, the same as other cities, and that the improvement of the waterways throughout the country is the one and only solution of our transportation problem. Motor trucks are not going to become a substitute for railway transportation. The upkeep of the roads is going to be enormous, and the maintaining of the motor trucks, the cost of fuel, is constantly increasing. A serious problem confronts America to-day on the petroleum situation. In five years from now we will not have a single barrel of reserve petroleum if they continue to consume it the way they are at the present time, unless new fields are found.

Recently a Pittsburgh shipper made inquiry of a motor-truck concern to transport 60 tons of freight that was needed in South America urgently, to be delivered at Philadelphia. The price for the movement of that 60 tons of freight was \$10,000, or \$166 per ton.

Mr. DEMPSEY. From where to where?

Mr. CAMPBELL. From Pittsburgh to the seaboard in Philadelphia; just for transporting it from Pittsburgh to the seaboard in Philadelphia, \$166 a ton.

Mr. JUEL. In what manner was it transported?

Mr. CAMPBELL. It will be transported in motor trucks because the need is urgent. But that indicates to you what it is going to cost to move freight by motor truck any long distance.

Mr. JUEL. What would have been the cost if you could have used it by water?

Mr. CAMPBELL. It should not have been over 80 or 90 cents or \$1 at the outside a ton. They are moving coal 52 miles on the Monongahela River at 12½ cents a ton.

Mr. DEMPSEY. What do you say about that, Mr. Cleary?

Mr. CLEARY. How far is it from Pittsburgh to Philadelphia?

Mr. CAMPBELL. There is no direct waterway to Philadelphia. It is 351 miles from Pittsburgh to Philadelphia by road.

Mr. CLEARY. If you had a good big canal there you could carry it for less than \$1 a ton?

Mr. CAMPBELL. That is what I say, because they are moving millions and millions of tons on the Monongahela at 12½ cents a ton. That is what it costs when they are paying high wages.

Mr. CLEARY. You mean a canal like a barge canal.

Mr. CAMPBELL. Yes, sir.

Mr. DEMPSEY. Suppose you tell us, Mr. Campbell, where your canal is to originate, where it is to end, what the size of it is to be, what its cost is to be, how long it is going to take to build it.

The CHAIRMAN. Mr. Campbell, that is to be covered in a statement sent by Mr. Stevenson.

This bill (6852) is a comprehensive waterways improvement bill and takes in projects from Maine to California and appropriates \$500,000,000 over a period of five years, and only contemplates taking up those projects that are approved by the engineers of the War Department, those that have already been approved or will be approved in the next year or so. And I would be glad to have the committee hear Mr. Patterson, who will read Mr. Stevenson's statement, and then I have several other gentlemen and representatives of different organizations that I would be glad to have the committee hear.

Mr. DEMPSEY. Now, let me say just one word to you about this bill before we start in. So far as the Mississippi, the Missouri, and Ohio are concerned, they have been considered and are being considered in the regular way by the committee, and appropriations are being made. The Ohio River has about \$9,000,000 appropriated now.

Mr. CAMPBELL. Have you a copy of the bill, Mr. Chairman, 6852, before you?

Mr. CLEARY. There is another little item there, if I might call your attention to it. It says \$3,000,000 annually for deepening the Hudson River from tidewater to the mouth of the New York barge canal. I might say that tidewater runs practically to the mouth of the barge canal now, 4 miles from Troy.

Mr. DEMPSEY. Then you take the Delaware River, they have something like \$1,000,000 or \$2,000,000 in that project to-day.

Mr. CAMPBELL. Well, I don't think any of the sums appropriated are adequate, Mr. Chairman, to complete it.

Mr. DEMPSEY. The committee will be very glad to hear your argument, Mr. Campbell, in any way that you want to present it, but it would appear to me—I think the committee will agree with me—that we would get more benefit out of presenting to us your particular project, because I think these other projects will all be covered in other ways.

Mr. CAMPBELL. Well, I appreciate your suggestion, Mr. Chairman.

The waterways organizations throughout the country, like the Mississippi Valley and the Atlantic Deep Waterways Association, all have been working for a year to get together on some plan of waterway improvement, not improvement piecemeal, but to reach a conclusion, some definite conclusion, as to what should be done with regard to improving the waterways throughout the entire country, to cooperate and ask Congress to appropriate money to provide for

all these waterways, these projects that have been approved by the engineers of the War Department, and not go about it piecemeal. That has been our trouble heretofore, because they work one and wait until that is completed and see how it operates, and then if it operates successfully and to the satisfaction of every Tom, Dick, and Harry, then we go in and ask for another appropriation. But here is a scheme, the only scheme, the only method whereby this country can solve its transportation problems—they are serious to-day, very serious, and by one comprehensive plan they can be put into one bill, or any number of bills, and have the committee pass on those and put them through en bloc, if necessary, or as one measure. That is the effort, and the Chamber of Commerce of the United States in all probability will indorse this project, not alone the project of the Lake Erie Canal but the project contemplating the broad improvement of the waterways, a broad plan to improve the waterways of the country.

Mr. DEMPSEY. If you will allow me to suggest, I think the members of the committee have been very diligent and have attended the hearings very regularly, and I think you will find, if you will examine, that the present river and harbor bill and the hearings in regard to the bill show that it has a very much broader scope than this bill would have; that it takes in the improvement not only of the projects you have here, but of about 40 projects, 40 large major projects altogether, and does embrace all of these projects, and I think the committee is very familiar with practically all of these projects.

Mr. CAMPBELL. Well, Mr. Chairman, if you will permit, we will make this exclusively a canal proposition.

Mr. DEMPSEY. I will be very glad indeed for you to proceed in your own way. I simply make that suggestion.

Mr. OSBORNE. It appears to me that Mr. Campbell wants to present a broad general policy. That, I gather, is his idea from looking over the bill.

Mr. CAMPBELL. Yes; that is exactly the idea.

Mr. DEMPSEY. We will be very glad indeed to hear him. Proceed in your own way, Mr. Campbell.

Mr. CAMPBELL. Mr. Chairman the Rivers and Harbors Committee is more familiar with waterways and the needs of them than any other committee in Congress. If we make it an exclusively Lake Erie and Ohio ship canal proposition, your committee loses jurisdiction, and we are frank to say that we don't want your committee to lose jurisdiction; therefore we are glad to couple it up to these rivers and harbors improvements, because we can not separate them, their interests are so closely commingled.

Now, I would be glad to have Mr. Patterson read the statement from Mr. Stevenson.

Mr. LEA. Mr. Campbell, to get what your position is, as I understand from you, you are in favor of a comprehensive development of the waterways of the country, and doing that with a view of prompt results, looking toward ultimate completion?

Mr. CAMPBELL. That is it exactly. I believe that every Representative from Pennsylvania will be glad to vote for the appropriation, and the major portion of this money contemplated to be appropriated in this bill is to be expended outside of the State of

Pennsylvania, and I believe every Member of Congress from the State of Pennsylvania would be glad to vote for that measure appropriating money to improve our waterways in California or improve them in Minnesota or in any other section of the United States, so as to get the waterways system and get an adequate and proper system of water transportation. I suppose our district does produce a larger tonnage than any other section in the world. Now, we are handicapped by lack of transportation facilities. If we have this canal it will add millions and millions of tons of freight and will not take any tonnage from the railroads. They are absolutely helpless in handling it in the Pittsburgh and Youngstown districts. It means additional tonnage for Pittsburgh and Youngstown and Mahoning Valley to the extent of millions and millions of tons per annum.

STATEMENT OF HON. A. P. NELSON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WISCONSIN.

Mr. NELSON. Mr. Chairman, may I be permitted to interrupt the gentleman from Pennsylvania, Mr. Campbell, to interject a brief statement at this point?

Mr. DEMPSEY. We will be glad to hear you, Mr. Nelson.

Mr. NELSON. I have been very much interested in the general statement made by the gentleman from Pennsylvania, Mr. Campbell, in presenting to the committee the provisions of his bill, and if I may be pardoned by the gentleman for interjecting myself at this point, I wish to make the following observations:

In a material and social sense the three greatest problems of this Nation to-day are the problem of increased production from farm, mine, and factory; the problem of proper conservation and utilization of all our national resources; and the problem of adequate transportation facilities at reasonable cost for our increased production and expanding commerce. America must and will address herself vigorously to a comprehensive and sane program in order to solve these three great problems of our Nation. Our railways, our inland waterways, and our public highways are the arteries through which must flow our ever-increasing production and expanding traffic. They are the highways of the future material and social prosperity and happiness of our great American people. These arteries of our Nation to-day are congested to a point of real serious national concern.

Some broad, constructive, and comprehensive plan taking in our whole program of transportation facilities of railways, waterways, and highways, must, at once, be put into action by Congress to the end that we shall have a coherent and economic union of our entire transportation facilities, enabling the industrial East, the agricultural South, and the agricultural and mining West to be tied together by a perfected machinery of distribution of their products that will give to each region its best market and highest incentive for more intense and increased production. Our network of railways is as vital to our united and growing country as the arteries are to the human body; but if the demands of easy circulation have come to exceed the capacity of these railway arteries, the health of our great country may well be protected by adding to the railway

systems, by a comprehensive plan of coordination and cooperation, every waterway and every highway and every motor-truck route that will serve this end.

Therefore, I desire to state briefly to the committee that after some months of deep study of the subject of waterway transportation and present inadequate railway transportation and congested terminal facilities, I am persuaded that we must, at once, ask our administration or Congress to appoint a competent commission, carefully selected, to study this problem in all its interrelations, and after a proper survey to bring forth a broad, comprehensive, and coordinated plan of the whole field of transportation facilities, including railways, waterways, highways, and motor-truck routes, to the end that as it now obtains in our most advanced European nations so in America our transportation arteries must become coordinated and cooperative, and not, as at present, disconnected, competitive, and destructive. I think this suggestion is worthy of our best thought and most earnest consideration. The plan should be sufficiently comprehensive and broad to take for its completion a term of years, possibly 10, 15, or 20 years, based upon proper engineering data, and should avoid the present crossed purposes and overlapping of construction, and to insist on cooperation and coordination, in order that for the least money we shall get the maximum results, and the maximum possibilities for the least effort for our States and Union.

Mr. LAYTON. All of which means, if you will permit me, that the Government of the United States shall absolutely control all of this coordinated system of highways, waterways, and railroads, or else own them.

Mr. NELSON. No; not necessarily. My thought is that we should try to facilitate and make possible, through this coordination and through the proper supervision of our Interstate Commerce Commission, and through any instrumentalities designated by the Government necessary to put into operation this comprehensive plan, to obtain the best results, and that private initiative shall in no way be hampered, but rather facilitated, and that there might grow out of such a plan the elimination of the intolerable practices of the past by which the railroads, when they came in competition with canals and inland waterways, immediately made a rate that would put the canal and inland waterway out of commission, and then, when they had succeeded in doing away with the stompette waterway facilities, either by purchase direct or by stifling in the way of rates, they would immediately increase their rates. In other words, Mr. Chairman and gentlemen of the committee, it is my firm belief, after thorough study of the question, that we should not have destructive competition between railways and inland waterways but sympathetic cooperation. Indeed, we must supplant destructive competition between railways and waterways by a program of constructive cooperation. There is plenty of room for growth and expansion of railways in legitimate territory void of inland waterways; and it is my belief that the whole country—the producer and the consumer—should have the benefit of the full and complete development of every artery of commerce through cooperative harmony along the policy suggested by section 500 of the Esch-Cummins Transportation Act of 1920, which reads as follows:

TITLE V.—MISCELLANEOUS PROVISIONS.

SEC. 500. It is hereby declared to be the policy of Congress to promote, encourage, and develop water transportation, service, and facilities in connection with the commerce of the United States, and to foster and preserve in full vigor both rail and water transportation.

It shall be the duty of the Secretary of War, with the object of promoting, encouraging, and developing inland waterway transportation facilities in connection with the commerce of the United States, to investigate the appropriate types of boats suitable for different classes of such waterways; to investigate the subject of water terminals, both for inland waterway traffic and for through traffic by water and rail, including the necessary docks, warehouses, apparatus, equipment, and appliances in connection therewith, and also railroad spurs and switches connecting with such terminals, with a view to devising the types most appropriate for different locations, and for the more expeditious and economical transfer or interchange of passengers or property between carriers by water and carriers by rail; to advise with communities, cities, and towns regarding the appropriate location of such terminals, and to cooperate with them in the preparation of plans for suitable terminal facilities; to investigate the existing status of water transportation upon the different inland waterways of the country, with a view to determining whether such waterways are being utilized to the extent of their capacity, and to what extent they are meeting the demands of traffic, and whether the water carriers utilizing such waterways are interchanging traffic with the railroads; and to investigate any other matter that may tend to promote and encourage inland water transportation. It shall also be the province and duty of the Secretary of War to compile, publish, and distribute, from time to time, such useful statistics, data, and information concerning transportation on inland waterways as he may deem to be of value to the commercial interests of the country.

The words "inland waterway" as used in this section shall be construed to include the Great Lakes.

And now, Mr. Chairman, I wish to beg pardon of the gentleman from Pennsylvania, Mr. Campbell, for interjecting myself at this point of his discussion and also for the kind indulgence of the committee. I simply wanted to present this comprehensive idea to the committee, and this large delegation present to-day.

Mr. CAMPBELL. It has been very enlightening, I am sure. I would like to have you hear Mr. Patterson now read the communication from Mr. Stevenson.

Mr. CAMPBELL. It has been very enlightening, I am sure.

I would like to have you hear Mr. Patterson now read the communication from Mr. Stevenson.

STATEMENT OF MR. BURD S. PATTERSON.

Mr. PATTERSON. Mr. William H. Stevenson has been detained as a member of the Waterways Committee of the Chamber of Commerce of the United States. He suggested the formation of that committee and they put him on it to help do the work, and he expected to be here this morning but he tells me their committee did not get through with their work yesterday and they have a little tangle that they want to get straightened out; therefore, he telegraphed me to go ahead and deliver his remarks.

Mr. DEMPSEY. We regret that he could not be here, but we have no doubt at all that you will supply his place very well, indeed.

Mr. PATTERSON. I would like to give you a list of the organizations that are represented here: The Chamber of Commerce of Pittsburgh; Pittsburgh Coal Exchange; Association of Masters, Mates, and Pilots of America; Pittsburgh Central Labor Union;

Youngstown, Lake Erie, and Ohio River Canal Board; the mayor of Youngstown; the Rivers and Harbors Congress, by its secretary, S. A. Thompson; Beaver Falls Rotary Club; Beaver Falls Chamber of Commerce; Lake Erie and Ohio River Canal Board; Lake Erie and Ohio River Canal Association; Federated Civic Bodies of the North Side, Pittsburgh; Business Men's Association of the East North Side; North Side Chamber of Commerce; Schuylkill Canal Improvement Association; Dravo Waterways Association; Tennessee River Improvement Association; Allegheny River Improvement Association; Lawrenceville Board of Trade; Carnegie Steel Co.; Pittsburgh Plate Glass Co.; Crucible Steel Co.; Civic Club of Allegheny County; a representative of the mayor of Louisville, Ky.; and the Allied Boards of Trade of Allegheny County, Pa. I will now read the paper by Mr. Stevenson. [Reading:]

I appear before you as chairman of the Mississippi to Atlantic internal waterways committee, having a membership in many States, and which was created by a convention held at Pittsburgh in January, 1918, attended by 224 delegates from 38 communities in 9 States. This committee prepared the bill introduced by Hon. Guy E. Campbell, upon which this hearing is being held and which was indorsed by a convention at Washington last December, attended by 125 delegates from 20 States. The principles of the bill were also indorsed by the last national rivers and harbors congress, in the following words:

"We commend to the favorable consideration of the Federal Congress the wisdom of largely increased appropriations for projects which have been, or may hereafter be, approved, to the end that they may be completed and open to traffic in a reasonable time."

I shall make a general argument for the bill as a whole, while representatives of the great waterways organizations of the country will speak for the particular projects embraced in the bill, the object of which is to provide proper waterways facilities for the whole Nation.

I am well aware that in asking at this time for an appropriation of \$100,000,000 a year for five years, to provide a Nation-wide and connected system of internal waterways and harbors, we will at once be confronted with the statement that there is need for the utmost possible economy in Government expenditures, and that therefore our request must be considered as a most remarkable one. It is, however, because we thoroughly believe in real national economy that we are appearing before you to-day. We believe in saving the people at the earliest possible time everything that will actually reduce the general cost of living without affecting any necessary Government expenditure. Things that can be left undone now, without present or near future great danger and loss to the Nation, can well be postponed to a more convenient season, and on such, undoubtedly, billions of dollars of national expenditure can very properly be saved.

But, as you well know, there are two kinds of economy—the false and the true. The former, while saving a penny to-day, wastes a pound to-morrow. The latter, while laying out a dollar to-day, reaps a tenfold profit to-morrow. The former has been well denominated the "penny wise and pound foolish" policy; the latter may perhaps be named as the "dollar prudent and eagle wise" policy. The former policy, pursued before the Great War, as you know, cost this Nation many billions of dollars during the war. If followed now, it will cost the Nation even greater sums in the near future. It is the wise, economical policy that we are here to advocate.

We ask you to authorize a Government expenditure of \$100,000,000 a year for five years, feeling sure that such an expenditure would in 10 years save the people 20 times the amount expended, and thereafter annually would save 5 or 6 times the Government outlay. Now, I am not speaking wildly or inadvisedly in making such a statement, nor without full knowledge of facts, which are also at your command. I need not enlarge upon the condition this country has been in during the last three years for lack of sufficient, regular, and cheap transportation facilities both for purposes of war and peace. Such lack, it has been estimated by competent authorities, has cost the people of this Nation \$20,000,000,000 in money, besides much suffering and privation. Because lack of transportation has necessitated a greatly decreased output by

our farms, our mines, and our industries generally, the result has been shortages of food, of fuel, ore, clothing, and building material. Because transportation could not be quickly, regularly, and cheaply provided, farm products have rotted in the fields, coal and iron ore, and other ores, have remained within the mines, timber has stood uncut in the forests, and metal and glass construction material has not been wrought, and clothing has not been made. As a result, there have been food, coal, ore, building, and clothing material shortages, and prices have soared. With the going up of prices have come the demands for increased wages. These have been granted, with the result that prices have again leaped up faster than the wages. Then have come more wage increases and still higher prices. The outcome is that with millions drawing higher wages than ever before, they are able to purchase less with their increased pay than they were when prices and wages were normal. All this, as has been said, has cost our people immensely, and the greatest cost of this cost has been the lack of proper transportation facilities. The cost to the people for this lack during the past three years, as has been said, has been estimated at \$20,000,000,000, or nearly two-thirds of the cost of the World War to the United States Government.

Now, there is no hope for any great relief in this line. As you well know, the transportation facilities of our Nation to-day are utterly inadequate, and have for years been growing more and more so. Great improvement was hoped for by the return of the railroads to private operation, but at the end of the first month of such operation the conditions were worse than ever and have not since been bettered. I admit that there will be likely to be considerable improvement, but nothing like what is necessary to properly transact the traffic business of the Nation.

The estimates of the amount of money needed to put our railroads in first-class condition vary from \$8,000,000,000 to \$15,000,000,000, and the time required from five to ten years. This does not take into account that about \$1,375,000,000 was spent outright, or authorized to be spent, by the Government during the past two and one-half years and which will never be repaid to the Treasury, nor that about \$1,200,000,000 was loaned the roads, which the Government hopes to get back some day. At the very lowest estimate, therefore, \$8,700,000,000 have been and will have to be spent on the railroads to make them function properly within the next five years, while the medium estimate is \$12,700,000,000. But even were this amount all to be expended in the next five years, our transportation facilities would still be inadequate. As is well known, the business of the country has for years been increasing at a much more rapid rate than its railroad facilities. This is admitted by leading railroad managers and by their organs. These facilities are, in fact, likely to be increased but little in the next five years, because of the railroads' inability to float bonds and stocks in the manner they did for a long period and because of the high price of money. There is no reasonable chance that the railroads can secure the money they require within the next five years, and if they had it to-day it would require that long to expend it and make the trackage and equipment improvements they require. The chances of building new railroads are equally dark for the next five years, for new areas of our country will be opened to settlement and many new industries established, which must task still further the existing railroads.

We are also about entering on a great campaign for foreign trade in competition with other countries, which will necessitate our having the cheapest transportation facilities. It will be useless for us to provide a great merchant marine if we can not load it with the products of our farms, our mines, and of the great industries of the interior of our country transported at such prices to the seacoast as will enable us to meet the competition of foreign countries.

For lack of cheap and reliable transport to the seaboard from the interior, we will lose billions of dollars in foreign trade we might secure. I have only to call your attention to the fact that in January, 1918, there were 415 vessels lying in New York Harbor, loaded or to be loaded with vitally necessary supplies for our own and the allied armies in Europe, and that they were detained there for weeks because of lack of fuel or cargoes, due to the inadequate railroad facilities. Had the New York Barge Canal and the Lake Erie and Ohio River Canal been in operation during the preceding summer and autumn, there would have been no lack of fuel or cargoes for these vessels, and the situation above described would not have developed—a situation which might well have lost us the World War, and which undoubtedly added billions to the cost of the conflict by retarding its close.

Now, we must recall that this situation was brought about by the fact that 50 per cent of the freight cars and 47 railroads were employed for weeks in carrying 6,000,000 tons of coal to the Great Lakes in the autumn of 1917 to save the people of the Northwest from freezing and the entire shut-down of their industries, and also to bring iron ore to the Ohio Valley furnaces busy making war material. This diversion of these cars upset the whole business transportation business of the country and caused congestion and shortages at many points, including New York. Now, if the canals mentioned had been operating, there would have been no coal shortage at the Great Lakes ports, no iron-ore shortage at the Ohio Valley furnaces, and no congestion and shortages of fuel and cargoes at New York Harbor or elsewhere. Billions of dollars would thus have been saved to our people, also much privation and suffering, and the end of the great World War would have been expedited.

As you know, the coal production of the country fell off very much during the last few years. This was not due to any lack of coal in the mines, nor to any lack of miners. It was solely due to the lack of sufficient means to transport the coal from the mines to the consumers. For lack of cars, many mines were idle or worked only part time. The miners were, therefore, in many instances compelled to seek other more regular and better-paying employment to meet the enhanced cost of living. This caused coal shortages from which the country suffered, the consequent shutting down, in whole or in part, of many industries, and a great increase in the price of coal. Thus the people were compelled to pay many billions of dollars they would have saved if we had had proper transportation facilities. Had the waterways system provided for in the Campbell bill been in existence, I have no hesitation in saying that our people would have saved, in lower prices and increased production, the \$20,000,000,000 they are estimated to have lost during the last three years, and would also have been spared much privation and suffering.

Now we are, as I have intimated, facing the loss of many more billions in the near future for the same reason, and this loss will continue for an indefinite period unless we at once take proper steps to apply the only great practical and economic remedy. The remedy is the provision of this great waterway system within the next five years, as well as the utmost possible increase of railroad facilities and of our good roads. But, you explain, it will cost \$100,000,000 a year for five years. So it will; but, as I have said, it has cost the Government in three years to keep the railroads in operation five and a half times that amount, and it will take from twelve to twenty times that sum in the next five years to put the railroads in the best possible condition, and then they will still be unable to alone carry properly, promptly, and cheaply the traffic of the country.

Now, let us see what our people will get at the end of five years by the expenditure of \$500,000,000 in that time on our waterways. They will have 500,000,000 tons of heavy, low-paying freight carried, a direct saving in freight charges of at least \$300,000,000 a year. Further than that, the railroad rates will be modified to at least an equal amount by the potential and actual competition of the waterways and the fact that they will relieve the railroads of so much non-profitable freight. The railroads can then carry more high-class, good-paying freight for less money and still show a much better balance sheet than ever before. Why, I heard a prominent railroad man in a public speech a couple of years ago declare that his railroad carried 66 per cent of its tonnage in coal, coke, ore, etc., at a loss and was compelled to put up the price on the other 34 per cent, composed of necessities of life, in order to make both ends meet. This is all wrong. The railroads should carry at least two-thirds of their tonnage at a profit, and they can do this if the waterways help out. And I might say that the railroads' tonnage with this waterways system will be larger, as far as high-class, good-paying freight is concerned, than ever. For the low price of raw materials carried by water will build up vast new industries and greatly increase our population and building and the railroads will reap the benefits as well as the people. The latter will benefit greatly by the lower cost of articles, induced by the lower cost of transportation on the railroads. They will not suffer from shortages and increased prices. The saving which will thus be effected to our people, directly and indirectly, should amount to several billions of dollars a year. Five years of operation of this waterway system, costing but \$500,000,000, would save our people in reduced prices and enhanced trade, domestic and foreign, \$20,000,000,000, or forty times what the Government is asked to invest in this water system.

You say I am talking wildly. But let me give concrete facts, which will prove my case. To-day Pittsburgh would have grass growing in many of its

streets. Its greatest industries would be idle, and many thousands of its inhabitants have emigrated to other communities but for the canalized Monongahela River. That river during the past three years has not only saved Pittsburgh's great industries, but it has been a great boon to the whole Nation, for in that period there was carried on that stream 40,000,000 tons of coal, not a pound of roads, which could not have carried it. The coal was carried on the river for 12.8 cents a ton, while the rail rate was 30 cents.

The saving in direct freight charges alone on this coal was therefore about \$27,000,000; but in addition, during these three years, about 10,000,000 tons of other material were carried at a saving of at least \$8,000,000 more. Here is a total saving of \$35,000,000 in three years. Now, the Government investment in the Monongahela has been about \$8,000,000, so that in three years the saving in direct freight alone has been more than quadruple the investment. But River have for years been less than on the Allegheny, which was not improved, and here we must add more saving to a considerable amount. But the greatest of all benefits from the canalized Monongahela has been the fact that during the last three years the coal carried on it kept alive the great industries of the Pittsburgh district, which made 40 per cent of the war munitions manufactured in this country. Thus many thousands of men were kept at work and aided by the output of the factories, which were kept running because of this waterway. I should add that a very large proportion of the great industries of coal.

To-day the Monongahela River is doing a greater business than ever. The railroad strike decreased the demands upon the river. This year the total in its palmiest days. But the canal cost fifteen times what the Government has expended on the Monongahela. When the Ohio River is fully improved and the Lake Erie and Ohio River Canal constructed, the traffic on the Monongahela will soon exceed 40,000,000 tons. The object lesson of this river has been so great that it has converted to the side of waterways and opened the faith on the railroads alone and who in some instances have owned their railroads; and these are now building boats as rapidly as possible, so that they can get their coal and coke by river, and are praying for the day when they will also be able to get their iron ore and ship their manufactured material to all sections by water.

Mr. JUEL. Will you excuse me just a minute? I wanted to suggest to the chairman that as we have only 25 minutes left that we may sit, if the gentleman now reading would condense his remarks and make a five-minute talk, we could hear from five other gentlemen in the remaining 25 minutes, and if we do not proceed along that line all the gentlemen that are here to speak before us will be cut out.

Mr. CAMPBELL. Mr. Chairman, I was going to ask if the committee could not sit this afternoon?

Mr. JUEL. We may have a roll call two minutes after 12 o'clock.

Mr. CAMPBELL. If we do, if necessary we will postpone it until tomorrow and continue the hearings then. These gentlemen, some of them, come from quite a distance, and we would like to have a full and complete hearing.

Mr. JUEL. That is what my suggestion is for.

Mr. CAMPBELL. Your suggestion is a good one and I approve of it, but as far as having only 25 minutes more, that is the part I take exception to.

Mr. JUEL. We may have another meeting to-morrow, and I think we ought to hear from a number of these gentlemen.

Mr. DEMPSKY. We have listened with a great deal of interest. I would say, to the gentleman—to that portion of the paper which he has read so far.

Mr. PATTERSON. I will be through in five minutes, Mr. Chairman.

Mr. JUUL. Mr. Patterson will not misunderstand my suggestion. I am afraid we will cut out of the hearing altogether gentlemen who have traveled quite a distance to be heard, and we would like to hear them.

Mr. PATTERSON. Yes; we want them to be heard. [Reading:]

It was called to my attention recently that during the last fortnight the National Tube Works, in the Soho district of Pittsburgh, which for years has been getting its coal by the Monongahela River, was saved from a shutdown by receiving by boat a cargo of skip iron, which it had always, until the railroad strike, received by rail. Also I learn that a leading Pittsburgh newspaper was saved from ceasing publication by being able to get a stock of paper by boat from Steubenville. Plans heretofore getting coal only by rail have during the last few weeks been kept going by coal carried by water. Within the past few months arrangements have also been made for shipping large quantities of coke on the Monongahela instead of by rail.

As a consequence of all these things, this year's tonnage on the river promises to exceed last year's figures of 17,500,000 tons by more than 3,000,000 tons. Now, what has been done on the Monongahela can be accomplished on the whole great waterway system provided in the Campbell bill, not perhaps, to such a large extent on some of the sections of that system, but sufficiently so on the average to justify the assertions I have made as to the great savings that would be effected to the people by such a system. I would only, in this connection, refer to the fact that it is estimated that the proposed Lake Erie and Ohio River Canal will carry 30,000,000 tons of heavy material at a saving in direct freight alone, annually, of at least \$50,000,000 a year, and that last June there was carried over the New York State Barge Canal from Buffalo to New York steel at a saving of \$1.90 per ton as compared with the rail rate between Pittsburgh and New York, a shorter distance.

Every merchant, manufacturer, and business man receiving freight knows that he must count on indefinite delay in its arrival by rail, and that this condition is getting worse, and this fact is one potent cause of high prices. Shipments of nonperishable freight by water on the Great Lakes, or properly improved rivers and canals, are much quicker and more regular and reliable than by rail. The average freight car goes about 25 miles a day, while boats on such waterways as we have just mentioned average three to four times that distance. Such service promotes economy and lower prices, and with the system of waterways we propose, the speed and regularity, as well as the cheapness of the shipments, would save our people billions of dollars annually.

But in another aspect this proposed waterways system would pay its cost. We mean as a means of national defense. We all know that when war burst upon us steps were taken in frantic haste to see what our waterways could do to help in the matter of transporting military supplies and of defending our country from aggression. The intracoastal canals along the Atlantic were greatly boomed in this latter connection. The Chesapeake & Ohio Canal was utilized to the utmost to supply the Washington Navy Yard with coal. Commissions were appointed to see to what use the old and practically abandoned Schuylkill Canal, and the Lehigh Navigation Canal, could be put. The possibilities of the Ohio and Mississippi Rivers were exploited; also of the New York State Barge Canal. The great value of the rivers and canals of France to the allied armies was impressed upon our officials and soldiers. They did more than the railroads to save the day. The report was made that efficient as were these French waterways, that with proper attention our own interior waterways could easily greatly excel them, both for war and peace purposes. Now, the system we advocate would undoubtedly prove a great means of national defense in case of need, as well as a most paying asset in time of peace. Why not, therefore, in making up our great military and naval estimates, include in them an item of only \$100,000,000 for this most important matter of national defense through our waterways? This would certainly save the expenditure of other vast sums for military and naval defense and would, therefore, be a most economical move.

I will now briefly describe this system. It will cover the Mississippi, Ohio, Missouri, and Illinois Rivers and their tributaries. It will provide connections between these rivers and the Great Lakes at two or more points. It will

connect the Great Lakes with the Atlantic at New York by way of the New York Barge Canal and the Improved Hudson River. Then from New York it will connect with the great system of Atlantic intracoastal canals, extending from Boston to Jacksonville, Fla., and embracing a canal across New Jersey. Then it will embrace intracoastal canals along the Gulf of Mexico and on the Pacific coast. Further than that, provision is made for improved harbors on the Atlantic, Pacific, Gulf, and Great Lakes coasts.

By this waterways system it will be possible to take a large boat and visit 32 States and Canada, and also go to the Panama Canal without change. A safe interior route free from enemy attack, and the storms of Hatteras, would be afforded from New York to New Orleans, and thence to the Panama Canal and our Pacific coast. It is, as you see, a National system we propose, and not a sectional one. It will benefit every class of our people, and particularly the farmers, who will, by reason of this waterway, secure many more cars than they can now get, and they will also in many instances be afforded cheaper transport by water for their products. As a result, they will have great inducements to increase their products, and these will be much cheapened to the consumers, who are the whole people.

Let me call your attention for a moment to two important features of this bill. One is the provision that every project must be first approved by the United States Engineers, the proper executive authority, and Congress, before any work can be undertaken. This will prevent any river or canal improvement which is not properly justified, and still silence the cry of pork barrel, which has often been invoked not in good faith, but solely to discredit all waterways improvements, whether good or bad. Next, there is a provision that a sufficient force of engineers and employees must be provided to complete all authorized projects in five years. This will obviate the great delays such as have occurred in the improvement of the Ohio River, and will insure the securing of this great system in a reasonable time. There is a further provision that not only projects already approved, but others which may be properly approved within three years shall be undertaken under this bill. This allows all meritorious projects to have a hearing. Now, we may be asked, "Why do you appropriate money in advance?" Simply that it may be available if needed, without delay. If it is not needed, it will stay in the Treasury and no one will suffer, but if it should be needed and not be available, then many would suffer.

In conclusion, I want to call your attention to the fact that Congress and the Executive have thus far done little or nothing toward providing a reconstruction program, which is calculated to place the country on a proper peace business basis, which takes into account the lessons of the last few years. It is true that the railroads have been returned to private ownership with some important regulations, but there has been no great constructive program evolved and enacted into law.

Mr. DEMPSEY. Let me call your attention right there to this, that I think this Congress has been remarkable in its program of reconstruction legislation. We have first the oil land leasing bill, which will enable us to supply the oil which we were going to need so badly.

Mr. CAMPBELL. I quite agree with you.

Mr. DEMPSEY. It is a bill that has been needed for a great many years.

Mr. PATTERSON. Has it been approved?

Mr. DEMPSEY. It has been approved and is the law.

Second, we have passed the general water-power bill, and it is to go into the hands of the conferees to-day or to-morrow. We have 60,000,000 horsepower of direct primary horsepower in the United States and 200,000,000 of secondary, and that legislation will enable us to utilize all that enormous horsepower of which we have now only 6,000,000. That is a problem that has confronted Congress for 50 years, and it has only been solved by this Congress.

Third, we have passed the railroad reorganization bill, which deals with the question of reasonable rates, giving a reasonable rate

to all roads, weak and strong, which is the first time that that problem has ever even been attempted to be solved since we put the interstate commerce act on the statute books.

I am quite clear that the gentleman is in accord with the general public in the view that reconstruction legislation has not been passed, but in justice to Congress I want to say that we have had a very remarkable reconstruction program, and that the country will be advised of it.

Mr. PATTERSON. He has guarded his statement by saying he knew a good many projects had been started but not enacted. I will apologize for Mr. Stevenson for those two omissions. He mentioned the railroad reorganization bill. [Reading:]

Now, we present to you in this Campbell bill such a program, one which if put into effect will go further toward solving the high cost of living than anything else that is possible; one that will greatly build up our industries and provide remunerative employment for our people; one that will vastly increase our foreign as well as our domestic trade; one which will permit the development of vast new areas without further increasing our transportation troubles. Such a program is wise, it is statesmanlike, and it is economical in the highest sense, and the time to undertake it is now, and you, gentlemen of this committee, are the men to begin this great work which will bring countless benefits to all our people and their blessings on those who practically initiate it.

(Mr. Patterson submitted the following papers:)

ITS TRIVIAL COST.

Now, as to the probable cost of this big national undertaking. It is estimated that all of the main trunk lines of our Nation's waterways can be properly improved, equipped, and put into service within five years' time, and at a cost no greater than was incurred by the building of the Panama Canal.

It is a safe prediction that the benefit to our whole people in value and service from such an investment would be many times greater than will ever be received from the use of the Panama Canal.

It is evident to any thoughtful mind that the value of the Panama Canal to the United States is a mere bagatelle compared to the full development of the vast Mississippi Valley territory, which would be assured by the restoration of traffic on its navigable waterways. Moreover, the amount thus expended would provide for the transportation of as much tonnage as would five times the same amount of money if invested in railroad building and equipment, to say nothing of the great saving to our people through the use of the cheaper method of transportation.

Four hundred millions spent upon this great constructive work is petty and insignificant when the value of its possibilities are weighed. This amount was spent on the war alone every eight and a half days during the past year. In other words, this splendid achievement would cost our people the same amount per annum for the short period of five years that we spent on the war alone every one and three-quarter days throughout the whole of last year.

We have grown accustomed to big figures, and no longer frighten us. The development of our Nation's waterways can no longer be delayed by the bugaboo of its cost. Our people want the transportation relief and the advantages so easily obtained, and they will now insistently demand them.

Our Government spent \$500,000,000 upon our railroads last year, and we are now told that \$750,000,000 more must be furnished for their relief. We favor spending whatever amount is needed to put our railroads in condition to properly handle our country's traffic, but we insist that our waterways should be given their share of financial aid so that they, too, may be made to play their part in furnishing cheap, adequate transportation to important sections of our country.

The full development of this "garden spot" of the United States would add to the wealth and prosperity of the entire country, for it goes without saying

that any plan or policy that benefits any section of the country must necessarily benefit the people of the whole country.

MISSISSIPPI VALLEY WATERWAYS ASSOCIATION,
619 Locust Street, St. Louis.
JAMES E. SMITH, President.

THOS. H. LOVELACE, Secretary.

COUNTY OF ALLEGHENY,
Pittsburgh, Pa., April 23, 1920.

CHAIRMAN OF RIVERS AND HARBORS COMMITTEE,
Washington, D. C.

DEAR SIR: At a meeting of the county commissioners held to-day the following resolution was adopted:

"Resolved, By the board of county commissioners of the county of Allegheny, Pa., that they approve of House bill No. 6852, known as the Campbell waterways bill, now pending in the House of Representatives of the United States, and they respectfully petition Congress to enact the same."

Respectfully, yours,

W. S. McCLATCHIEY,
Chief Clerk.

PITTSBURGH STEEL PRODUCTS CO.,
Pittsburgh, Pa., April 26, 1920.

CHAIRMAN RIVERS AND HARBORS COMMITTEE,
House of Representatives, Washington, D. C.

DEAR SIR: We beg to urge favorable action on the Campbell bill now before your committee, appropriating \$100,000,000 annually for five years for waterway improvements.

We all realize the inability of the railroads to satisfactorily handle their quota of the country's transportation, and the situation is constantly becoming more acute; and it is plainly to be seen that relief must come from the waterways, which would solve the problem in a sane and practical way.

Yours, very truly,

PITTSBURGH STEEL PRODUCTS CO.,
W. C. REITZ, Treasurer.

COUNCIL OF THE CITY OF PITTSBURGH,
Pittsburgh, Pa., April 26, 1920.

CHAIRMAN OF THE RIVERS AND HARBORS COMMITTEE,
House of Representatives, Washington, D. C.

The members of the city council of Pittsburgh heartily approve of and indorse the House bill No. 6852 introduced by Congressman Guy E. Campbell, and most respectfully and earnestly urge its early favorable consideration by your committee.

Yours, very truly,

JOHN S. HERRON,
President of Council.

ASSOCIATION OF MASTERS, MATES, AND PILOTS OF AMERICA,
Pittsburgh, Pa., April 24, 1920.

CHAIRMAN AND MEMBERS OF THE RIVERS AND HARBORS COMMITTEE,
Washington, D. C.

DEAR SIRS: The Masters and Pilots Association of America, in convention assembled at Washington, D. C., January 27, 1920, unanimously indorsed the Campbell bill for the improvement of the inland waterways. At this convention there were delegates from all the important seaport and inland cities of the United States representing a membership of 6,000 practical navigators licensed by the Government. Pittsburgh Association No. 25 again urge the passage of this bill realizing from years of experience the vital importance for the improvement of these waterways.

Respectfully,

PITTSBURGH ASSOCIATION No. 25,
A. R. MACKEY, Secretary.

MISSISSIPPI VALLEY WATERWAYS ASSOCIATION,
St. Louis, Mo., April 20, 1920.

Mr. FRED S. PATTERSON,
1002 Hartle Building, Pittsburgh, Pa.

DEAR SIR: I greatly regret that I will not be able to attend the hearing before the Rivers and Harbors Committee on the Campbell waterways bill.

I have promised to go to Atlantic City to attend the meeting of the waterway committee of the Chamber of Commerce of the United States, to be held there on Monday and Tuesday, the 26th and 27th.

I hope that your hearing may be entirely successful.

I have already expressed my views in reference to the bill, both at the waterways convention held in Pittsburgh in January, 1918, as well as in the last issue of the National Inland Waterways Magazine.

With best wishes for your success, I am,

Very sincerely, yours,

JAS. E. SMITH, President.

INDORSES CAMPBELL BILL.

(The following is an extract from the article by James E. Smith, president of the Mississippi Valley Waterways Association, in the National Inland Waterways Magazine, referred to in the foregoing letter.)

"At the convention of the Mississippi to Atlantic Inland Waterways Association, held at Pittsburgh, January 7, 1919, I made an address in which I suggested a demand upon Congress for an appropriation of \$100,000,000 a year for a period of five years, and the adoption by Congress of a broad, liberal, and definite plan for the permanent improvement and use of all of the country's important inland waterways, the work to be carried on by following the same practical, methodical, and businesslike methods that were employed in the building of the Panama Canal.

"By following such a plan the entire work could be completed within the period of five years, and the serious transportation problem which now menaces our commercial growth would be satisfactorily solved.

"Congressman Guy E. Campbell of Pennsylvania was present at the Pittsburgh convention, and later he presented a bill, which is now before Congress, in which he advocates the plan which I presented, and which I sincerely hope he may be able to secure its enactment.

"The time has surely arrived when the Government should go to work in a practical, serious, businesslike way to put our great water highways to work and make them serve as carriers of commerce.

"They should promptly stop the wasteful, resultless policy in the treatment of our inland waterways that has been followed in the past, and they can make no better start than by the adoption of the plan proposed in the same and sensible bill offered by Congressman Campbell."

Mr. CAMPBELL, Mr. Chairman, Pittsburgh gets its iron ore from the Northwest, and I know that the people of Minnesota are very much interested in this project, for they have so informed us, and we have here the Republican whip from Minnesota, Mr. Knutson, and I would be glad to have you hear a word from him with reference to this project.

Mr. DEMPSEY. We will be very glad to hear Mr. Knutson.

STATEMENT OF HON. HAROLD KNUTSON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MINNESOTA.

Mr. KNUTSON. Mr. Chairman, I think all Members of Congress have given more or less study to the question of transportation, and no one can look into the problem even superficially without becoming aware of the urgent necessity for utilizing the waterways of the country to a greater degree than has been done in the past, and also to connect the various waterways in so far as it is feasible.

Of course my interest in this matter is not only national but sectional. I am particularly interested in the development of the Mississippi River and in connecting the Mississippi River with the Great Lakes, and also with the project at the top of page 2, which would give the great Northwest direct waterway communication with the coal fields of Pennsylvania and would enable the Northwest to lay its iron ore down at the smelters, thereby obviating the necessity for railroad transportation. I also favor connecting the Great Lakes with tidewater.

As the committee is undoubtedly aware, Minnesota ships to Pittsburgh and other eastern steel centers approximately 50,000,000 tons of iron ore. I think it is—I will have to look that up, but it is somewhere in that neighborhood—45,000,000 tons of iron ore per year. While we have several ore-carrying roads in Minnesota running from Vermilion and the Mesaba Range to Duluth, it would seem that a way could be devised whereby the ore could be picked up in Duluth and laid down at Pittsburgh by boat, and it would also seem that it would be possible to tap the great coal sections by boat and transport the coal from the mine to Duluth by water.

Mr. DEMPSEY. Might I ask the gentleman a question there? A number of steel plants have been constructed at Buffalo in the past few years. What is the difference in the rates to Buffalo and to Pittsburgh from Minnesota? That comes all the way by water.

Mr. KNUTSON. I am unable to answer the gentleman's question. That is a phase of it that I have not looked into. Of course, that ore would come all the way by water, as the chairman says.

During the war we were badly crippled in the Northwest for the want of coal. We were put on a ration basis. Now, that should not be; there should not be any difficulty in supplying the Northwest with coal. There is no part of the country that stands in need of fuel for heating purposes to a greater degree than the Northwest. It is the coldest section of the country, because we are the farthest away from the tempering influences of the sea. We were compelled to close down some schools for the want of coal last winter and the year before. Now, that condition should not obtain, and I am satisfied that with the construction of a comprehensive system of waterways it would not exist.

Mr. DEMPSEY. Speaking about the reconstruction program, isn't the greatest thing we have in Congress to-day the question of a proper shipping policy to utilize the 15,000,000 tons of shipping that we have constructed since we went to war?

Mr. KNUTSON. Absolutely. There is no question about that. And I think another thing that could be said in favor of this proposition is that it would materially reduce the cost of living, because it would reduce the cost of freight. It would, as a preceding speaker has pointed out, enable the railroads to handle a higher class of freight than they are now doing.

Mr. DEMPSEY. Lighter and more perishable.

Mr. KNUTSON. Lighter and more perishable, and freight that would pay a greater return. Such commodities as iron ore, coal, grain, and lumber should be handled by water wherever possible, and we should tap all of these various sections with canals, as Germany has done. I think perhaps Germany's waterway systems did more to bring her to the forefront commercially than any other one thing.

Now, we are very much in the position of a boy who has outgrown all of his clothes, as far as our transportation system is concerned. The preceding speaker pointed out that it would take several billion dollars. I am not prepared to say; I don't know how much study the gentleman who prepared the article read by the preceding speaker has given this matter and how much dependence may be placed upon his statistics. Of course when one gets to thinking about the necessity of putting six or eight or ten billion dollars into the rehabilitation of railroads, he is dealing with sums that stagger the imagination. There have only been about a billion minutes since the time of Christ, and as I said it is staggering to think of the sums that are needed, that would be needed, to bring the railroads up to a point where they could handle the freight of this country. Now, I don't know how much it would cost to put in the system proposed by Mr. Campbell's bill (H. R. 6852), but I am satisfied it would not cost anywhere near the sum mentioned in the paper just read.

Mr. Campbell, how much would it cost to complete your plan? Have you looked into that phase of it?

Mr. CAMPBELL. Approximately \$85,000,000 for the canal, for the Lake Erie & Ohio Ship Canal; \$500,000,000 is what is contemplated to be expended in five years for improving the several waterways.

Mr. KNUTSON. That is 10 cents on the dollar as compared to what it would cost to put the railroads on the basis where they could handle the situation.

Now, take it during the war, there was congestion of freight all over the country, at all primary points. Our grain elevators out in the Northwest refused to receive grain along in October, 1917 and 1918, because they could not get cars to take care of the grain that was coming in from the farm to the primary elevators, due largely to the fact that the cars were held at the larger points because they could not be unloaded. Now, if we had a system of canals with sufficient barges to handle much of this internal freight of a heavier nature, I am satisfied that we would correct the shortage of transportation in this country.

I will ask to be excused now, and I thank the committee. I hope you gentlemen will see your way clear to either report Mr. Campbell's bill out or some other measure that will take care of the situation. I do not believe that the committee can take up any work that will tend to put the country back on a normal basis in shorter time than the bill introduced, or some plan along this line, and I just want to say a word to the preceding speaker—I gather that it was not his own article that he read?

Mr. CAMPBELL. No.

Mr. KNUTSON. There is a great deal of criticism over the country with reference to the failure of Congress to function. Unfortunately, the Almighty only put 24 hours in a day. The average Member gets to his office at from 8.30 to 9 o'clock in the morning, and is often there till 10 or 11 o'clock at night. Our mornings are taken up with committee hearings just like this one. There are probably 30 committees sitting to-day; the House meets at 12, and we sit until 5 or 5.30 or 6, and then we go back to our offices and sign our mail, and if we have any time left then we devote it to studying such propositions as this. As I said, unfortunately the Almighty did not give us enough hours to do all the work that we might do.

Mr. PATTERSON. I am a newspaper man and well acquainted with how hard Congressmen work.

Mr. DEMSEY. I want to call your attention to this: We all make, it seems to me—and I think the committee will agree with me—we are all apt to fall into the common error that we feel that when we have dug the waterway and have the depth needed, the problem is solved. The Erie Canal is a demonstration of the fact that that is not true. There we have not only dug the waterway but we have provided the terminals; we have provided loading and unloading facilities; we are providing exchanges with the railroads; and we haven't any traffic. Now, since the Erie Canal was dug—since it was enlarged to 12 feet through new construction we can carry 2,500 tons, I think Col. Taylor will tell you, instead of 1,000 tons—in spite of that fact—that we can carry two and a half times what we anticipated we could carry—we haven't any traffic. Now, you have got a very much more difficult problem than simply the problem of constructing a waterway.

Mr. KNUTSON. I grant that that is true; but I maintain this, that what has been done in Germany and other European countries can be done in this country.

Mr. DEMSEY. It can be solved and should be solved; but you can not solve it without recognizing that you have a very much broader problem than simply the construction of the waterway.

Mr. KNUTSON. I grant that is true; but I will ask the chairman if the failure to utilize the Erie Canal to the fullest extent has not been due to the fact that the railroads have made such attractive rates that people preferred to ship by rail? You haven't had any legislation preventing the railroad companies from inaugurating cut-throat rates along the Erie Canal in the past. We did not have it until the railroad bill was put through here, about a month ago.

Mr. DEMSEY. I think this, Mr. Knutson; I do not believe that the period of rivalry, of destructive rivalry, is any longer with us; because I believe that men like Smith, of the New York Central; Rea, of the Pennsylvania; and Lovett in the Northwest—I think those men are big enough men to recognize that there is a congestion, and that they do not need to slaughter the waterways in order to get business; that there is more business than they can both handle. I think your problem is largely one of lack of management; that you have to have some one look after transportation on the waterways just the same as you have to have managers by rail, and then, I think, your problem is providing your boats. You haven't the boats.

Mr. KNUTSON. Well, don't you think another thing is due to the fact that the American people want everything done like that—immediately—just exactly as they expect Congress to convene at 12 o'clock and have the country back on a peace basis by 6? When they order a carload of coal they want it to-morrow or the day after, rather than to wait a week or ten days and have it come by water. They prefer to pay twice the freight and have it come immediately. I think that has something to do with it. I know that that was the case on the Mississippi River, the freight was too slow for the transportation of lumber and coal. We got some coal up into our country from the Ohio and up through the Mississippi, but it took too long. And they started to hauling iron ore from St. Paul to St. Louis. They were going to put in a smelter down there—I think they did put in a smel-

ter, but it took too long. They didn't have the patience or else they had not organized their business in such a way that they could utilize water transportation and keep going.

Mr. CLEARY. May I suggest that the trouble is that they haven't got the boats? That is the whole trouble.

Mr. KNUTSON. I agree with you.

Mr. DEMPSEY. I don't think it is the whole trouble, but it is a very large factor.

Mr. CLEARY. These things that you are speaking of don't exist. The fact is that in carrying grain—they carry great lots of it into New York all the time and it just lays there, No. 1 wheat, and they will sell it out a certain number of bushels at a time, and there isn't any hurry about grain. The trouble is that they don't carry it by water because they haven't got the boats.

Mr. KNUTSON. I know the trouble out on the Mississippi River was largely a matter of time.

Mr. CLEARY. You never had a supply of boats on the Mississippi River. In the first place, you have got to have water. That is the first thing. Now, the Mississippi River—if you had 10 or 12 feet of water and then you had a lot of boats you would have no trouble, but you have never had that.

Mr. KNUTSON. Well, let us first get the canals and then we will get the boats.

Mr. CLEARY. That is it exactly.

Mr. KNUTSON. Let the Government assist us in getting the boats. I thank the committee for its attention.

Col. HARRY TAYLOR (Corps of Engineers, United States Army). You say that destructive competition no longer exists. I would like to ask if you know the fact that the elevators in New York City refused last year to handle grain brought to New York by boat that came through the barge canal?

Mr. DEMPSEY. I did not know that.

Col. TAYLOR. That is the fact.

Mr. DEMPSEY. But does it necessarily result from that, Colonel, that that would naturally be traceable to the railroads?

Col. TAYLOR. Railroad influence did it.

Mr. DEMPSEY. The railroads were at that time under Government control, and I am perfectly familiar with the fact that the director general several times announced that he would not permit freight to be carried by water, because he needed the revenue.

Mr. KNUTSON. Isn't it also a fact, Colonel, that a large percentage of the terminal elevators are owned by the railroads? Take it at Duluth, the Great Northern and the Northern Pacific own large terminal elevators, and of course any grain brought in by boat, which would cut them out of the freight haul, would be rejected if there was grain coming in by rail.

Now, you speak of Government control; we had Government control in form and in name only; the railroads were being operated by their managers, by the old managers, who were stockholders, large stockholders, in the roads. Isn't that a fact?

Mr. DEMPSEY. Well, in some respects. I don't think we would have had the same results from operation under private management.

Mr. KNUTSON. If we had had real Government operation and Government control during the war, you would have had to take the

railroads out of the hands of those who had financial interest in them.

Mr. CAMPBELL. Before I ask what the committee's pleasure is, I would like to remark in regard to the situation in Pittsburgh with reference to our particular project—that is, the Lake Erie and Ohio Ship Canal—we have the traffic and we have the boats, or we can get them right in the city of Pittsburgh, because the steel corporation and the other manufacturing concerns can produce everything essential to build a boat, and they are interested in this traffic in getting their ore to Pittsburgh. The Monongahela River in the last three years has handled 50,000,000 tons of coal. They have the boats, they have the management, and they have the water there. They have the traffic and we can get the boats; what we need is the water. And the city of Pittsburgh will provide terminal facilities. I have the assurance of the city council that they will provide ample terminal facilities.

Mr. JUUL. Mr. Chairman, I move that we adjourn until 10 o'clock to-morrow morning.

Mr. Campbell, let me say that we are under very great obligations to you for bringing these gentlemen here, and I am sure we have been benefited by the hearings so far. Now, we are willing to do either one of two things to meet your convenience, if the rest of the committee are willing to join me—would you gentlemen rather adjourn until 2 or 3 o'clock this afternoon?

Mr. CAMPBELL. I think we would like to do that.

Mr. JUUL. I will change my motion to make it 3 o'clock.

Mr. DEMPSEY. Then we will recess until 3 o'clock this afternoon. (Whereupon, at 12.15 o'clock p. m., the committee recessed until 3 o'clock p. m., this day.)

AFTER RECESS.

(The committee reassembled at 3 o'clock p. m., pursuant to recess.)

Mr. DEMPSEY. The committee will be in order. Mr. Campbell, how much time do you think you will want?

Mr. CAMPBELL. It depends upon the questions, Mr. Chairman.

Mr. DEMPSEY. Will 4 o'clock be plenty of time?

Mr. CAMPBELL. It might run a little longer than that, Mr. Chairman. We would like to expedite it all we possibly can.

I would like for you to hear Mr. S. A. Thompson, secretary of the National Rivers and Harbors Congress.

STATEMENT OF MR. S. A. THOMPSON, SECRETARY NATIONAL RIVERS AND HARBORS CONGRESS, WASHINGTON, D. C.

Mr. THOMPSON. Mr. Chairman and gentlemen, because there are so many here to speak I shall be very brief, and for two reasons I shall not discuss the projects in the Campbell bill. One is that the National Rivers and Harbors Congress is organized to work for a waterway policy and not for individual projects. The other—and quite as good a reason—is that gentlemen who are very much more familiar with the individual projects than I am are here to speak for them. In the limited time at my disposal I shall attempt to call only one or two points to the attention of the committee.

Transportation affects everything bought or sold by any individual. It limits the territory tributary to the trade of any city. It determines the development of the resources of any State; and, far more than any other single factor, it fixes the share obtained by any nation in the commerce of the world. Every increase in transportation costs narrows the market range within which we can do business with the world in competition with others in the same line.

Mr. DEMPSEY. Right there, Mr. Thompson, speaking of competition with other nations, don't you think Congress ought to adopt some policy to utilize the 15,000,000 tons of shipping that we now have?

Mr. THOMPSON. I undoubtedly do, sir.

Mr. DEMPSEY. To see that it is kept under the American flag and to enable us to conquer the trade of South and Central America and hold it?

Mr. THOMPSON. That is one of the great and essential parts of the broad economic policy that we would like to see the Congress of the United States adopt as soon as it can be properly worked out. And as one of the great feeders to our merchant marine I would like to see our waterways completely developed and given dependable channels at the earliest possible moment.

One of the things to which I wanted to call your attention is the radical difference in the way that waterways have been treated in Europe and in this country, and the consequent difference in the results that have been obtained. I want to call to your minds—and I am sorry that I have not the maps here for you to look at—the radical difference in the outlines of the Continent of Europe and the Continent of North America. We have a great expanse of land, with a very small amount of coast line in comparison with the area. Europe can rightly be called a peninsula made up of peninsulas. From Marseilles to Havre is about 500 miles; from Genoa to Antwerp is 500 miles; from Trieste to Stettin is about 550 miles; from Odessa to Koenigsburg is 700 miles; while from Mariupol to Petrograd is 940 miles.

That means, gentlemen, that you have got to go away into the heart of European Russia, almost to Moscow, before you get to a point which is as far from tidewater, in an air line, as Cincinnati is from Baltimore—and when you get to Cincinnati you are not halfway across the continent, you are only a little more than halfway to the Mississippi River. This difference in continental outlines is one thing which helps to explain the difference between the foreign trade of European countries and that of the United States. Another thing is the fact that most of those countries have completely developed waterway systems. Within the former bounds of Germany there were, in round numbers, 8,500 miles of waterways, 6,200 of which were classed as important and regularly used; France, taking all of them into consideration—

Mr. DEMPSEY (interposing). How much of them artificial and how much natural?

Mr. THOMPSON. I am sorry to say that at the moment I can not answer that question.

Mr. DEMPSEY. Can you give it approximately?

Mr. THOMPSON. I think approximately one-third of the mileage is natural and the other two-thirds artificial, provided that rivers that

have been canalized and furnished with locks are included with the canals as artificial waterways. However, I will look the matter up and put the figures in the record.

What things really mean is often best shown by comparison, and if we in the United States had developed our transportation system to the same extent that Germany has, we would have to-day 125,000 miles of usable waterways, of which 90,000 miles would be completely improved and have dependable channels; we would have 565,000 miles of railway and 1,500,000 miles of hard-surfaced roads. I mean if our transportation system had been developed to the same extent as that of Germany in proportion to the area of the two countries.

Mr. JUUL (interposing). Just a minute there—you realize, of course, that the population to the square mile that is being served over there is far greater than it is here?

Mr. THOMPSON. Undoubtedly.

Mr. JUUL. We have, for instance, in Texas 262,000 square miles, which is practically the area of Germany.

Mr. THOMPSON. It is larger by 53,000 square miles than Germany.

Mr. JUUL. Of course, we could not expect to have through our immense territory the same transportation facilities that they have.

Mr. THOMPSON. No.

Mr. DEMPSEY. We are not of the same age; and then we have been devoting the last 60 or 70 years to building up the great West.

Mr. THOMPSON. Yes, sir. The statements that I have made are simply generalizations which help us to get at the principles that lie underneath.

Mr. DEMPSEY. It shows the aim and the ambition.

Mr. THOMPSON. Yes, sir; and, furthermore, you can never have as large a population to the square mile in the United States as there is in Europe until you have the three methods of transportation developed and coordinated. I was much interested in the remarks of the gentleman over here (Mr. Nelson, of Minnesota), about coordination, and some years ago I worked out a diagram, copies of which I will hand you, which in a way shows my idea of a coordinated transportation system. You will note that the three sides of the triangle are marked "Road," "Rail," and "River." The circles indicate that, while each method of transportation has a field of action of its own, those fields of action overlap.

(The following is the diagram referred to by Mr. Thompson.)



Mr. THOMPSON. Let me give you another generalization which will help to reveal the underlying principle. In 1905 the Prussian Reichstag passed a bill appropriating \$80,500,000 for the further improvement of their waterways. That German Kingdom had already spent \$129,000,000 on waterways and had invested \$2,225,000,000 in State-owned railways.

These figures are not insignificant even when stated alone, but the full meaning must be shown by comparison. If the United States, after investing nearly \$60,000,000,000 in State-owned railways and spending \$3,465,000,000 on waterways, should pass a single rivers and harbors bill appropriating \$2,160,000,000 more, it would then have done, with regard to transportation and in proportion to area, exactly what the Kingdom of Prussia did 15 years ago.

Of course, they have been at it much longer than we have; they were using waterways in Europe before Columbus sailed across the sea to discover this country; but it should be remembered that the greater part of the development of European waterways, the work which has modernized them and made them what they are today, has been done since 1870. And what has been the result?

I confess that I was surprised when I found that for every one of the 20 years ending with 1913 the foreign commerce of Germany exceeded the foreign commerce of the United States, and that the excess was growing greater every year. It would take too long to mention each year separately, so I will divide the 20 years into four periods of 5 years each. In the first five-year period the average excess of the foreign commerce of Germany over that of United States was \$207,000,000; in the second five-year period it was \$221,000,000; in the third it was \$400,000,000; in the fourth five-year period it was \$712,000,000. In the single year of 1912 it was \$853,000,000; and for the whole 20 years it was \$7,700,000,000.

There is nothing in that record for the United States to be proud of, even if the two countries were somewhere nearly equal in other respects, but, compared with Germany (as it was in 1913), we have more than 17 times the area, 50 per cent greater population, three times the accumulated wealth, and natural resources greater by tenfold, possibly by twentyfold. I frankly admit that I have had water on the brain for 35 years, and I suppose the case is chronic and incurable. However, I am not so completely a man of one idea that I attribute this startling excess of the foreign trade of Germany solely to her waterways or her transportation system, but I do attribute the difference mainly to the fact that in Germany—always meaning as it was before the war—railways, highways, and waterways have been more systematically developed and completely coordinated than in any other country on earth.

It is the part of statesmanship to look forward; it is the part of legislators, in the responsible positions that you and your colleagues hold, to provide for the future. We have just passed through the greatest war in all history. Europe to-day lies largely disorganized and helpless, but the history of the past shows that, when the natural resources remain and the great bulk of the population is left alive, a nation has wonderful powers of recuperation. It may take five years, it may take ten years, it may take even longer than that; but

that as it may, the time is surely coming when Germany and the other countries of Europe will again be competing with the United States for the foreign commerce of the world, and unless, as mentioned by you, Mr. Chairman, we keep our flag afloat on all the seas, unless we follow the example of the nations over there and improve our waterways so that goods can be carried to and from our harbors by the cheapest form of transportation, we shall again be hopelessly beaten in the contest for the trade of the world; dense population in this country will be found only near the ocean and the vast interior of the United States will be nothing but a great, undeveloped back-yard to the seacoast cities.

In my judgment the true ideal is to have population, industry, and commerce as equally developed as possible over our entire territory. If there be anyone anywhere who thinks that in speaking thus I am speaking in behalf of the interior and against the interests of the States and cities on the coast, I will ask him whether New York, Boston, Philadelphia, and the other cities on the coast have grown great and prosperous in spite of the development of the interior, or because of it? To anyone of intelligence, Mr. Chairman, that question answers itself.

For example, take a look at Hamburg, the principal port of Germany, which before the war was disputing with London and New York as to which was the greatest port in the world. There is a wonderful network of waterways extending from Hamburg into the heart of Germany. According to some authorities, there have been many years when nearly two-thirds of all the commerce that went in or out of Hamburg did not touch a dock or a railroad at all. Ocean vessels, instead of tying up at a dock, were moored to the dolphins, as they are called, out in the harbor. On one side would be barges that had come down the Elbe loading their cargo into the ship, while on the other side were empty barges waiting to receive cargo out of the ship and carry it up into the country.

The growth of Hamburg was due to the development of its tributary territory, its hinterland as the Germans call it, and the seaports of the United States will never realize the growth and prosperity which is possible for them until the whole interior of the country is teeming with population and humming with industry.

My 10 minutes is up, but if I may be allowed to do so I shall be glad to put into the record a few figures showing the marvelous growth of traffic carried to and from Hamburg on the inland waterways, and also some figures showing the traffic carried both by rail and by waterways in France, Germany, and Belgium.

Mr. JUEL. Either your organization, or a similar one, issued a statement some years ago showing the proportionate cost of the movement of each ton of merchandise by wagon and by rail.

Mr. THOMPSON. I am personally responsible for that, sir.

Mr. JUEL. I believe it was given first in a lecture or a speech in the senate of Illinois, in the house of Illinois.

Mr. THOMPSON. Yes, sir; I was the guilty one.

Mr. JUEL. I would like, if you have that statement here, to have you put it into the record.

Mr. THOMPSON. I will be very glad to do so.

Mr. JUEL. If the chairman has no objection.

Mr. DEMPSEY. Very well.

Mr. JUEL. It was very interesting. It gave the cost of transportation per ton per mile.

Mr. THOMPSON. I have it. If there were time, I would be glad to give it, but my time is up and I do not want to trespass. I will put it into the record.

Mr. JUEL. Can you mention it just briefly?

Mr. THOMPSON. It will only take me about three minutes, I think, to run through it.

Mr. JUEL. If there is no objection, I would like to have that.

Mr. THOMPSON. The experts of the Agricultural Department estimate the cost of transporting a ton of freight a distance of 1 mile by horse and wagon, on the average road in the United States, at 23 cents. In England, where the roads are much better than most of those in this country and where much attention has been given to the development of what the English call a steam lorry and we would call a steam truck, it is said that goods can be carried for 5 cents per ton per mile.

The average rate on all the railroads in the United States during a number of years before the war was about $7\frac{1}{2}$ mills per ton per mile, but I can pick out a special group of roads upon which the average was about 5 mills.

On the Erie Canal in those same years the ton-mile rate was about 3 mills, while on certain canals in Europe (notably the Teltow Canal, near Berlin) which are deeper and wider and on which electric or other mechanical systems of haulage are used, the rate was 2 mills.

The official records kept at the "Soo" show that the average rate on the freight carried into and out of Lake Superior in 1913 was two-thirds of a mill per ton-mile, while coal is habitually carried from Buffalo to Duluth, and I have the authority of the Pittsburgh Coal Exchange for the statement that it has often been carried from Pittsburgh to New Orleans for one-third of a mill per ton per mile.

These are microscopic figures; let me translate them into something with which the average business man is more familiar. Here is something [holding up a dollar bill] with which I hope all of you are very much more familiar than I am. Suppose you have a ton of freight to ship and a dollar to spend in shipping it. How far will the dollar carry the ton by these different methods and at these different rates of transportation?

By horse and wagon, a little over 4 miles; by English steam truck, 20 miles; by rail, at the average rate for United States railways, 133 miles; at the rate on the group of selected railways, 200 miles; on the Erie Canal, 333 miles; on the European canals, 500 miles; by lake, at the average rate through the "Soo" Canal in 1913, 1,500 miles; while, at the rate at which coal is carried both on the Great Lakes and on the Ohio and Mississippi Rivers, the ton of freight can be shipped 30 miles for a cent, 300 miles for a dime, 3,000 miles for a dollar.

It must already be apparent that the difference in the cost of transportation by different methods is sufficiently great to be worthy of serious consideration, but let me carry the argument a step further. Taking any point as a center, over how great a territory will a dollar carry a ton by these different methods and at these various rates of transportation?

By horse and wagon, over a circle a little more than 8 miles in diameter; with the English steam truck on the English good road, the diameter of the circle becomes 40 miles; at the average railway rate in the United States, it expands to 266 miles; at the rate on the selected railways, to 400 miles; at the Erie Canal rate, to 666 miles; at the European canal rate, to 1,000 miles; at the "Soo" Canal rate, to 3,000 miles; while at the coal rate which has been named, the dollar will carry the ton to the outer limits of a circle 6,000 miles in diameter.

These figures emphasize the fact which I have already stated—namely, that every increase in the cost of transportation decreases the territory within which business can be done in competition with others in the same line—or, conversely, everything that is done to decrease the cost of transportation in this country extends the market for American production, and helps to give steady employment to American labor.

Mr. DEMPSEY. Let me ask you just one question before you sit down. As I understand you, your view is that transportation, water transportation, has reached a greater degree of perfection in Germany than anywhere else in the world?

Mr. THOMPSON. I believe I would say that; yes, sir.

Mr. DEMPSEY. And they recognized that the proper method of transportation was by ocean-going steamships to the wharf at the ocean limits, and then a transfer to barges which waited there and took the cargoes through the rivers or the canals?

Mr. THOMPSON. Yes, sir. And, furthermore—if you will pardon me one word more—the question you asked this morning, with which I fully agree, only I could not attempt to touch on one-hundredth part of the things that I would be glad to speak of if the time were unlimited—in Germany more thoroughly than in any other place that I am familiar with they have not only provided for proper relations between the railways and the waterways but they compel all the municipalities to build proper terminals so that these waterways can be used, and they all work together.

Mr. DEMPSEY. On the waterways you have your terminals, you have your exchanges, and you have your transfer?

Mr. THOMPSON. You have the different methods of transportation, you have the terminals, you have the transfer, you have everything working together for the upbuilding of the Nation.

(Data in regard to European waterways furnished by Mr. S. A. Thompson at the request of the chairman of the Committee on Rivers and Harbors.)

Inland water traffic at Hamburg.

	Boats.	Tons. ¹
Received from the upper Elbe:		
1861-1870, average.....	4,966	322,094
1871-1880, average.....	5,993	477,013
1881-1890, average.....	10,711	1,286,792
1891.....	14,110	1,734,394
1900.....	18,714	2,606,920
1907.....	17,800	2,186,808
1913.....	17,800	4,650,000
Shipped to the upper Elbe:		
1861-1870, average.....	4,987	340,579
1871-1880, average.....	5,983	491,823
1881-1890, average.....	10,687	1,217,242
1891.....	14,350	2,309,133
1900.....	18,517	2,437,215
1907.....	17,800	2,584,143
1913.....	21,000	4,762,000

¹ Metric tons of 2,204.6 pounds.² Figures for 1903 and previous years from "The Port of Hamburg and the Lower Elbe," by Maj. F. A. Mahan (retired), Document No. 5, National Waterways Commission.³ From "The Port of Hamburg," by Edwin J. Clapp.⁴ The figures for 1913, which are taken from a report by Consul General L. A. Berthold dated at Dresden, Jan. 25, 1917 (Commerce Reports No. 69, Mar. 24, 1917), should be taken with reserve. It is difficult to understand how there could have been 21,000 departures with only 17,800 arrivals.

GERMANY.

The Statesman's Year-Book for 1912 gives the total length of the navigable waterways of Germany as 8,530 miles, divided as follows:

	Miles.
Navigable rivers.....	4,980
Canalized rivers.....	878
Canals.....	1,315
Ship canals, channels through lakes, etc.....	1,254
Unclassified.....	100
Total.....	8,530

In a report made by W. H. Lindley to the British Royal Commission on Canals and Waterways it is stated that the length of the German waterways which are regularly used and of sufficient importance to warrant the collection of statistics of traffic is 6,200 miles.

Growth of traffic on the inland waterways and the railways of Germany.

TOTAL TONNAGE.

[In metric tons.]

Year.	Waterways.	Railways.
1875.....	20,800,000	167,000,000
1885.....	27,600,000	280,000,000
1895.....	46,700,000	351,000,000
1905.....	103,400,000	588,700,000
1913.....	99,625,000	505,890,000
Per cent of increase, 1875-1905.....	397.1	241.2

Ton-mileage, which takes into account not only the tonnage but the distance over which it is moved, gives a truer statement of traffic than tonnage figures alone.

TON-MILEAGE.

Year.	Waterways.	Railways.
1875.....	1,798,000,000	6,738,000,000
1885.....	2,976,000,000	10,282,000,000
1895.....	4,650,000,000	16,438,000,000
1905.....	9,300,000,000	27,652,000,000
Per cent of increase, 1875-1905.....	417.2	309.1

FRANCE.

According to a report made by Consul General Frank H. Mason (Doc. No. 16, National Waterways Commission), there were in France, in 1906, 8,612 miles of navigable waterways, of which 5,562 miles were rivers and 3,050 miles were canals.

Lindley's report to the British royal commission gives 10,350 miles as the total length of French waterways in 1905. Of this total, however, 1,820 miles were used only for rafts, leaving 8,530 miles as the length of waterways used by boats. In the following table, compiled from Lindley's report, the figures for 1905 relate to the traffic on the more important waterways with a length of 7,485 miles.

Growth of tonnage and ton-mileage on the inland waterways and the railways of France.

TONNAGE.

[In metric tons.]

Year.	Waterways.	Railways.
1880.....	18,000,000	80,774,000
1885.....	19,572,000	75,162,000
1895.....	27,174,000	100,834,000
1905.....	34,000,000	126,000,000
1911.....	38,117,648	138,117,648
Per cent of increase, 1880-1905.....	89.0	72.0

TON MILEAGE.

Year.	Waterways.	Railways.
1880.....	1,244,000,000	6,417,000,000
1885.....	1,521,000,000	6,070,000,000
1895.....	2,335,000,000	8,013,000,000
1905.....	3,152,000,000	10,406,000,000
Per cent of increase, 1880-1905.....	153.4	70.7

¹ French Statistical Year Book.

A further indication of the economic importance of the French waterways is given by the fact that in 1907 no less than 50,109 loaded boats were received and dispatched at the city of Paris. The cargoes carried by these boats amounted to 10,845,568 metric tons, which is equal to 11,855,058 net tons of 2,000 pounds.

BELGIUM.

Lindley gives the total length of Belgian waterways as 1,345 miles. Of this total, 330 miles are of small importance and no registration of traffic is made thereon. Of the more important waterways there are 75 miles of tidal rivers, 307 miles of canalized rivers, and 633 miles of canals, a total of 1,015 miles.

The figures in the following tables are compiled from Lindley's report, with the exception of those for the ton-mileage of waterways for 1912, which are taken from the Belgian Statistical Yearbook.

Growth of traffic on the inland waterways of Belgium.

Year.	Metric tons.	Ton-mileage.
1880.....	25,242,000	338,150,000
1885.....	30,242,000	442,240,000
1900.....	38,178,000	554,430,000
1905.....	53,345,000	718,360,000
1912.....		1,075,415,000
Per cent of increase, 1880-1905.....	76.3	60.1

Traffic on Belgian railways.

	Metric tons.
1880.....	42,900,000
1885.....	46,964,000
1900.....	55,108,000
1905.....	65,319,000
Per cent of increase, 1880-1905.....	39.9

Two striking facts are made plain by these tables, all the figures in which are based on the official publications of the respective Governments: First, that in all three of the countries named there has been a great increase in the amount of traffic carried on the inland waterways; and, second, that the ratio of increase has been much greater on the waterways than on the railways.

HOLLAND.

Holland is the only country in the world in which the power of the Government had to be invoked to prevent the waterways from crushing the railways. There is hardly a town or a village in any part of the country which can not be reached by a canal, on which, as a rule, freight charges are so low that no railway can compete with them. Although the rates are fixed at the lowest point that will cover the expenses and pay a small dividend, the railways only carry about 10 per cent of the traffic, and they would not get that much if the waterways were not sometimes frozen up.

Holland, with an area of 12,761 square miles, has 2,370 miles of railways and 2,968 miles of waterways. Of the latter 560 miles are rivers and 2,408 miles are canals. All the rivers and 342 miles of the canals are exclusively controlled by the Government, which also exercises partial authority over another 148 miles of canals. Control of the remaining canals is divided between provincial, local, and private authority. (See Doc. No. 18, National Waterways Commission, p. 19.)

In view of the fact that canals are used in Holland as streets and roads are used in other countries, no complete statement of water traffic is obtainable. Available figures, however, give a good indication of the extent to which the waterways are used.

During 1913 a regular service of barges and market boats was maintained between Amsterdam and 294 points in Holland, 46,319 trips were made by steamboats between Amsterdam and points in the interior, and 59,637 boats, having a gross tonnage of 10,798,889 tons, were locked through the Merwede Canal, which leads from Amsterdam toward the Rhine. (Chamber of Commerce and Factories at Amsterdam, Report for 1913.)

In 1912 the ocean vessels entered at Rotterdam numbered 10,208, with a tonnage of 12,094,030 tons, while the inland vessels using the harbor numbered 136,887, with a tonnage of 29,187,791 tons (boats less than 10 tons and steamers less than 5 tons being omitted). In the same year 14,053,064 metric tons of goods were shipped from Rotterdam "along the rivers," while the total traffic by rail was only 2,616,210 tons, of which 1,803,966 tons were received and 812,244 tons were shipped. (Chamber of Commerce of Rotterdam, Report for 1912.)

STATEMENT OF HON. BENJAMIN F. WELTY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OHIO.

Mr. WELTY. Mr. Chairman and gentlemen of the committee, I notice two New Yorkers on the committee. It has been a hundred years ago since you stretched your arms toward Ohio and invited us to participate in the building of canals. You built the Erie Canal and asked us to do something for the purpose of connecting Ohio with the Lakes. I say it is a hundred years ago, and it seems that we are just now completing the cycle. We are repeating history again. I think that we are coming to the dawn now of a new form of transportation. The time has come when we must cooperate and cease being hostile with each other. I think the railroads are beginning to realize that they can not carry commerce any more, and I like a comprehensive bill of this kind, but it does not go quite far enough into western Ohio. I am very much interested in the Miami & Erie Canal from Cincinnati to Toledo, Ohio, and a branch on toward the country of my good friend from Chicago, Mr. Juul, to connect Lake Erie with Lake Michigan, so that they will not have to go around the Soo with their commerce for the purpose of relieving congestion.

Mr. JUUL. You want to cut across Michigan?

Mr. WELTY. Yes; I want to cut across and shake hands with you, at the same time we are shaking hands with New York.

Mr. HICKEY. At what point on Lake Michigan?

Mr. WELTY. At Defiance they cut across to Fort Wayne and thence Chicago. It is an old route that has been surveyed and authorized by Congress, in 1916, and a resurvey has been ordered.

In the few minutes that I have I want to call attention to the fact, as my friend, Mr. Thompson, said, the Mississippi Valley is not receiving the benefits from the Panama Canal, as compared with the benefits that the Pacific and Atlantic States are at the present time.

Mr. DEMPSEY. Why not?

Mr. WELTY. After the Panama Canal was completed the rates were reduced between Pacific and Atlantic terminals. The Union Pacific asked for the reduction of rates so that canned fruit from the home of my friend from California, Mr. Lea, and salmon from the Pacific coast could be shipped by way of the canal to New York for 30 cents by water and by rail and water for 40 cents, while if we wanted to ship it to Ohio or the Mississippi Valley we would have to pay 85 cents per hundred pounds. So the only way that we can do is to ship it to New York first. In that way we get a rate of 40 cents, the rate to New York, and then the rate from New York, for instance, to Cincinnati, Toledo, and Lima is 25 cents, so 40 cents plus 25 cents would be 65 cents; so we would save something by shipping to New York first, and congesting everything in New York for three, four, five, or six months, and often before we get hold of it it is spoiled.

Mr. DEMPSEY. What do you think about using the Erie Canal to capacity, so as to bring it up to Buffalo?

Mr. WELTY. I am in favor of using anything to get it back to Ohio.

Now, I think our transportation system is all false and forced. For instance, a business man came to me the other day and told me

that he had stopped in Philadelphia and New York and begged for sugar. Now, we have several beet-sugar factories in our section. One of them is 20 miles from Lima. Whenever he buys his sugar from that beet factory he pays the New York price plus the freight from New York to Lima for shipping the 20 miles. I say that is a forced condition which is absolutely false and is unfair, and we can not continue in that condition very long. In other words, you are starving the central freight territory, consisting of Indiana, southern Michigan, and Ohio. It is unfair.

But we are arguing now about the canal proposition. After we got the invitation from the honored governor of New York we built not only one canal, but the Federal Government, with the aid of the State of Ohio, built four canals. They built one from Cincinnati to Toledo; another from Portsmouth, by way of Columbus, to Sandusky; another from Marietta to Cleveland; and the other one from Pittsburgh on up to the Lake; and those canals were carrying the freight north and south, until the Civil War came, and then, of course, all commerce north and south was destroyed and the canals became an easy prey to the railroads. But now we feel that we are coming again into our own.

Mr. DEMPSEY. What about those canals to-day?

Mr. WELTY. That is just what I was coming to. Those canals cost the Federal Government and the State of Ohio over \$16,000,000. They have been in disuse for almost 50 years. Figure your compound interest on \$16,000,000 for 50 years. It is almost enough to carry on the government of the great sovereign State of Ohio. And yet those canals, I say, are in disuse; they are not used for agricultural purposes in the country; they are not used for boulevards or sewers in the cities, but they are simply in disuse; they are waiting for the good people of the Federal Government and the State of Ohio to do something.

Mr. JULL. Can they be restored?

Mr. WELTY. Indeed they can be restored; yes. The property is there; the land belongs to the Government. It deeded I don't know how many acres to the State of Ohio for the purpose of building these canals. The title to these canals is with the Government; the Federal Government reserved the title to these canals in its act of 1825, I think. There is your property in absolute disuse. We should either abandon them or improve them. In their present condition they are a nuisance, an eyesore; good only to breed mosquitoes; receptacles for tin cans and dead cats.

I am in favor of building something on the order as contemplated in this bill. We have been going on with waterways in a way that does not seem businesslike. For instance, I think you started the improvement on the Ohio in 1888—something like that—I am not sure.

A VOICE. 1827.

Mr. WELTY. But I mean the last, the dams, the locks and dams. Now, this committee and some Members of Congress—I am not saying all this committee, but some members of this committee—feel that the people along the Ohio River, the Mississippi, and the Missouri, and some of the other streams have not done their part; that they have not built their terminals.

Mr. DEMPSEY. Well, they tell the truth, don't they, on that?

Mr. WELTY. Absolutely, because I understand that some places along the Mississippi they carry the goods back and forth from the boats, exactly the same as the Indians did. But while you are telling the truth about that, what assurance have they that Congress is going to stand hitched upon these improvements?

Mr. DEMPSEY. They have every assurance. They have in the Treasury of the United States appropriated for the Ohio River to-day between nine and ten million dollars, all the money they can use, if they use it just as rapidly as they can possibly use it with every available implement with which to undertake the work, for, I should say, a period of three years, anyway. And they are going to have more money, if they need it, right along. There never has been a time when they haven't had money.

Mr. WELTY. Now, let us see about that. You and I are elected for the Sixty-sixth Congress.

Mr. DEMPSEY. Yes.

Mr. WELTY. There is no power on earth that can take that right away from us, but we are not so sure that we will be here for the Sixty-seventh Congress. We were here before, of course; some of us hope to return, but this Congress can not bind the Sixty-seventh Congress in its appropriations unless they do it in the form of a contract. All they do is to make appropriations for, as you say, \$9,000,000, is it?

Mr. DEMPSEY. You would not dare to make a contract to-day. You have absolutely prohibitive costs of doing the work, and you wouldn't dare make a permanent contract on the basis of the peak of cost of production, would you?

Mr. WELTY. Oh, no; I don't mean that; but I mean that they ought to pass a law which would obligate the Federal Government to make this improvement within a certain number of years, so that those who are in charge of making improvements can continue to make these improvements, and we would know to a certainty just when it would be completed.

Mr. DEMPSEY. The difficulty about doing that is this: Suppose you had had a law back there on the statute books during the war; now, you would have had to divert all your industries to winning the war during that period.

Mr. WELTY. Yes.

Mr. DEMPSEY. Now, the war is not the whole thing; you might have other things that would come in and prevent a continuous progress of the work so as to complete it at a certain time.

Mr. WELTY. That is true, but here is what I want to convey: There ought to be something tangible so that there would be an obligation on the part of the succeeding Congress to appropriate for the purpose of carrying on the work. I have in mind some verbal agreements made by some gentlemen, I understand, in Kansas City, agreeing to canalize the Missouri River provided they built terminals and boats.

The people in that city and in that State, I understand, carried out their obligations, but the Federal Government has failed in theirs, and they have failed because there was not a continuing obligation on a succeeding Congress. In other words, Congress did not make a contract. I am not going to delay this committee, but I think you ought to have some plan for improvement. You can't

expect the people along a stream to build terminals so long as they do not know that that stream will be canalized. There are no terminals built along the Ohio River. I don't think there are any built at Cincinnati. I wish there were. I don't know whether you have them at Pittsburgh; you might have them there because you have received the cream of the improvements first. They began canalizing at the head of the stream when they improved the Ohio River, instead of beginning at the mouth of the stream. But here is what Ohio is going to do—I want you Pittsburghers to remember that—they have already passed an enabling act providing for canal districts along these old canals, 25 miles along each side of the canals, permitting the people to vote whether they want to issue bonds to build terminals in the improvement of these canals, or whether they want to abandon them. The truck is the most useful in distances of 25 miles. Now, in addition to that we hope that Ohio will be able to amend its constitution so as to lend State aid. During all this time you have spent over \$160,495,695.23 to canalize the Ohio River and its tributaries for the purpose of permitting the loading of boats with coal at the mines. Do you want to carry that coal to the sunny South or are you going to use it in the North, especially during the winter season? At present you can not carry that coal any farther than the north bank of the Ohio River, and yet I say you spend this amount for the purpose of improving this stream and its tributaries so that these boats might be loaded right at the mines. This coal ought to be permitted to continue on north without unloading, and some day in the very near future we hope to ask Congress to help us rebuild these canals. We hope to have a provision in which Congress will say, "We will pay a certain amount to rebuild these canals on condition that the sovereign State with its political subdivision will do the rest." Then, when the people along the route, this canal district, will vote to do that, when the people of Ohio will vote to rebuild these canals, it becomes a contract, it then becomes an obligation on the part of the Federal Government, and I know that the Federal Government will do that if it ever makes that kind of a contract with a sovereign State and those political subdivisions. That is what I intend to convey on that matter.

I think, my friends, that in the building of our commerce we should look forward. We can not afford, even at this time, to be saving at the spigot and wasting at the bung hole. You are losing—think what Ohio is paying right now for our canned goods that come from California; we are paying three times the freight that New York is paying at the present time. Every user of coal mined south of the Ohio River could save at least \$1 per ton could these boats continue north without unloading. The railroads charge \$1.50 per ton freight to haul this coal from Cincinnati to Toledo, Ohio. This in addition to loading—and loading it at Cincinnati and Toledo.

Mr. DEMPSEY. I would say to the gentleman that the hearings of this committee in the framing of the bill that is now before the House were had entirely upon the theory of appropriating all the money that was necessary for the commerce and all the money that could economically be used for the eight months for which the appropriation is made.

Mr. WELTY. That is true. Of course, I am glad to find that the Senate doubled that amount.

Mr. DEMPSEY. They have not doubled it. You mean that the Senate has passed a separate bill.

Mr. WELTY. They increased it, I think, to \$24,000,000.

Mr. DEMPSEY. It will have to have action in the House before that becomes a law.

Mr. WELTY. Well, all I care to say is that I think we ought to have some definite program, and I don't want this committee, I don't want anybody to be blaming the folks along these streams where the money has been spent, for failing to build terminals, because a stream is worth nothing unless it is built so that the commerce can be carried as a whole from one end to the other.

Mr. DEMPSEY. Let me make this suggestion there. There are parts of the Ohio where they have obtained the contemplated depth and where they use the stream just as much as they will ever use it for local traffic, and the work is progressing just as rapidly as diligence and the use of money will permit it to progress. Don't you think that at least where they have completed the work on the river they should provide terminals?

Mr. WELTY. No; because it is impracticable.

Mr. DEMPSEY. I think you are entirely at variance with the committee.

Mr. WELTY. It is impossible to use a stream until that stream is finished so that you can carry your product, for instance, on the Ohio from Pittsburgh down to New Orleans, or Cairo, at least. There is no use of trying to put cars and locomotives upon a track unless that track is completed. If there is one small portion out the track remains useless and your whole system remains useless.

Mr. DEMPSEY. Wouldn't your whole stream remain useless after the Government work was completed if they had no terminals?

Mr. WELTY. Yes.

Mr. DEMPSEY. Are you going to waste a period of years building those terminals?

Mr. WELTY. I am not justifying the delay on the part of the people along the stream altogether. I think the people along the stream should have faith in their own Government. I think that they should proceed and build terminals all along the line; yes. And when you come to rebuild these canals all we will ask for Congress to do is to say just how much they will do on condition that Pennsylvania and Ohio and Indiana will come forward with their political subdivisions and do the rest.

Mr. DEMPSEY. We are watching with great interest to see what Ohio accomplishes through her taxation scheme.

Mr. WELTY. Yes; the General Assembly of Ohio passed that bill, and we are hoping now to amend the constitution so that all the people north of the Ohio River can participate in the rebuilding of these canals.

Mr. CAMPBELL. Mr. Chairman, I would like you to hear Mr. Bollenbacher, of the Central Trades Union of Pittsburgh.

STATEMENT OF MR. PETER BOLLENBACHER, OF THE CENTRAL TRADES LABOR UNION, PITTSBURGH, PA.

Mr. BOLLENBACHER. Mr. Chairman and gentlemen of the committee, I represent organized labor, especially from the western section of the State of Pennsylvania.

From the very inception of this project of improving the waterways of the country organized labor in that section of the country has been in favor of the proposition. We have reasons for being in favor of it. First, it will bring about additional employment; second, we think that it would probably bring down the cost of living in this manner, that products that are not perishable could be shipped cheaper than they could by rail. We contend that a bushel of potatoes shipped from some point in Kentucky to the city of Pittsburgh could be shipped cheaper than if you would ship a bushel of potatoes from Pittsburgh to Greensburg. Another point that we contend is this: When we meet the employer on common ground, requesting an increase in wages, he generally uses as an excuse for refusing it, the high cost of transportation. As the gentleman stated here this morning, if we had canals through the State of Pennsylvania and could ship finished products \$100 cheaper to the city of Philadelphia, you realize, gentlemen, what a benefit the employer of that industrial institution would have.

I do not want to bore you with a lengthy speech, because I do not know anything about building canals. I will leave that to the other gentlemen, but in concluding I wish to state that the sooner this is done the better labor will feel. Labor feels that it is a benefit to them and will be a benefit to the community at large.

Mr. DEMPSEY. We are very glad to have heard you, Mr. Bollenbacher.

Mr. CAMPBELL. I would like to have you hear Mr. James P. Leaf, of Beaver Falls, Pa., of the Dravo Waterways Association.

STATEMENT OF MR. JAMES P. LEAF, C. E., BEAVER FALLS, PA.

Mr. LEAF. Mr. Chairman and gentlemen of the Committee on Rivers and Harbors, I represent the city of Beaver Falls as their city engineer, also the Rotary Club of Beaver Falls, and the Dravo Waterways Association, of Beaver County, Pa., an association organized a good many years ago to help dam the Ohio River, and we have been in the harness ever since.

I would like to say that we appreciate very much the action of Congress in improving our rivers. We feel that they have done a wonderful thing, and I will say to you that the people in the upper end of the Ohio River Valley are building boats, building steamboats, barges, and are building terminals. In the Pittsburgh district at least a million dollars has been spent in building wharves and terminal facilities to utilize the river. The United States Steel Co. is building 78 barges and 3 steamboats to go into the service. Part of them are in the service now. Jones & Laughlin Steel Co. have seven steamboats and a fleet of barges using the Ohio River, and just as fast as they get an opportunity you will find that the people will use the river.

We do not need to tell you what opposition the rivers have had. I want to say that Beaver Falls is a city that has had water transportation. We still have an elegant river, but it is so steep that the water all runs out of it, and we would like to have slack water again. We were on this Erie Canal, built by the State of Pennsylvania, and we are in favor of this general proposition of improving

the waterways. Any place you want to improve the waterways we will agree to it and help, and wait our turn; but we are specifically interested in the joining of the Ohio River system to the Great Lakes, by the Lake Erie & Ohio River Ship Canal via Beaver River, not only for our benefit, but for the benefit of 38 States in this United States and of Canada. We have in Ohio, Virginia, West Virginia, and Pennsylvania the coal and the brick that the Northwest needs. They have in Michigan and the Northwest the iron ore that we need and are using. Now, there is no reason in the world why the coal can not be loaded in Pittsburgh and sent to Duluth, and the same boat bring back a full cargo of iron ore. It costs 80 cents a ton to bring iron ore from Duluth to the Lake ports, 1,000 miles, and it costs \$1.20—or over a dollar always—to bring it 100 miles from the Lake ports to Pittsburgh.

WATERWAY CONNECTING LAKE ERIE WITH THE OHIO RIVER, VIA BEAVER RIVER.

The Lake Erie & Ohio River Ship Canal has been approved by the Government engineers. It is about 100 miles long, of which 50 miles is slack water, using the natural streams. The summit level has 2,500 square miles of drainage, and the summit would have a 30-mile level with no lock in it. This goes through the most populous manufacturing country in the world. There isn't a strip of country that is 100 miles long in the world that has as many people manufacturing goods that require cheap transportation. That part of the country did this Nation wonderful good during the war, and some parts of it were badly handicapped on account of not having water transportation.

It has been recorded that we are not building barges to use on the Erie Canal through New York. They are building them just as fast as they can build them and as fast as the proposition will permit it. We will have to just drop out any proposition on account of the conditions of the war, because it took all the transportation we had to keep up with the war proposition, and we are told by the railroads that they are thousands of locomotives short; they are hundreds and hundreds of thousands of cars short. We know that; everybody admits it. We have had a car shortage in Pittsburgh that is chronic for the last 25 years; we couldn't get half the cars we could have used. The coal miners don't get coal cars to transport the coal when they ought to have them. If our waterways were developed, the mines could work steadily and there would not be coal shortages.

This proposition would be a conservation measure that would help to take care of the floods by storing the waters at the headwaters for the use of the canal, and it would materially affect the flood waters in Cincinnati and down along the Ohio River. That project is up before each State and it is up before the United States Government, and everybody approves it and thinks we ought to keep the water back during floods, when we don't need it, and drop it down in the summer, when we do need water.

The war has awakened the people of the United States and it will have its effect. The men who went to France and other countries

during this war saw the great development that they have over there. Our friends in the railroads have been telling us for years that we are interfering with the railroad business if we improve the rivers. That is not true, for the simple reason that Canada owns more railroads and more canals than we do, yet they are not as large as the State of Pennsylvania in capital and population.

France owns the railroads and the canals and the rivers and highways, and every little stream in France is canalized, and every little stream is used for power purposes to generate electricity and run mills. You can go along through a meadow and you wouldn't see a stream there. The Marne River, where the big battle was fought, is just a small canalized stream 9 feet deep and 200 feet across. Lots of the boys didn't know there was a river in this valley until they got into it.

We ought to use our wonderful water powers here for generating electricity, and running mills which is being done in the Ohio River in a new construction of the dams, and it is designed at Pittsburgh at the permanent dam to generate electricity.

These canals and river improvements will stabilize business; that is, it will make it so that we can depend on our business. We are all tied up in the Pittsburgh district now on account of the strike. Several times we have been tied up there on account of not being able to get coal close enough that if we had had good roads we could have sent our trucks down to the mine and brought it to our mills. Now we are improving our roads, and this Government should improve its roads, its railroads, and its rivers, and it should do them altogether. There should be no such condition of shipping salmon through the gentleman's home in Ohio down to New York and then shipping it back to its place of destination; it should be shipped to its place of destination direct.

Mr. DEMPSEY. Wasn't that the inevitable result of the water transportation being cheaper than rail transportation?

Mr. LEAF. No, sir.

Mr. DEMPSEY. Taking the long haul by water and the short haul by rail. That is all that means, isn't it?

Mr. LEAF. No, sir. Now, take the condition at Rochester, where I was interested in the glass business, we could ship a carload of glass to San Francisco and reship it back to Salt Lake City cheaper than we could ship it to Salt Lake City direct, when the same car went through Salt Lake City to San Francisco and came back to Salt Lake City. Now, there is no transportation problem there; it is only arbitrary business and in favor of killing water transportation. That is what that was.

Mr. DEMPSEY. I think that rule out there has been modified within the last few months.

Mr. LEAF. I have no doubt that is true.

Mr. DEMPSEY. I think they have had that modified so that substantially it is satisfactory to what they call the mountain States. I am not sure about it, however.

Mr. LEAF. I have no doubt it will be just as soon as the people wake up and get their eyes open. They will straighten out these things. There is no doubt about that.

Mr. LEA. I think that was a matter for the Interstate Commerce Commission. They had the power, but they didn't use it; they permitted that condition to continue.

Mr. DEMPSEY. You know very much more about that than I do, Mr. Lea.

Mr. LEA. There are two sides to that question, but the Interstate Commerce Commission did have the power, but they did not give the relief.

Mr. DEMPSEY. And now it has been substantially arranged, has it not?

Mr. LEA. Well, the law has not been changed. The proposition was to make an arbitrary rate law, which I think would be about equally vicious as the past practice. The real need is for the exercise of legitimate discretion to do justice to both terminal and inter-point shipments according to the particular circumstances.

The improvement of the rivers should be done by the Government; they own and control them and should develop them for the benefit of the people. This is an investment on the part of Congress which will pay good dividends, and not an expense as rival interests tell us. The indirect benefit of improved rivers is always equal and often greater than the navigation by way of developing power, holding back floods and furnishing a supply of water. For manufacturing and domestic use this water supply is of great value.

As a concrete example of the benefit of the Government river improvements, take the Ohio River in Pennsylvania, the United States Government spent about \$10,000,000 in building dams in this section, and the plants of Jones & Laughlin Steele Co., the Crucible Steel, the Colonial Steel, the Ambridge Bridge, and the Riter, Conley Co., have together invested, in the last 10 years, more than \$60,000,000 in new plants along this improvement, which investment would have been impossible had not the Ohio been slack watered.

This is surely a good investment on the part of Congress especially if we consider the value to the Government in having these plants turn out war material. The fact that they could get a coal supply by the river allowed them to keep running at full capacity, when plants depending on railroad transportation were obliged to run part time. The Monongahela River Valley is developed far beyond any nonimproved river. The people are demanding the development of the waterways all over the country, and the Lake Erie & Ohio River Ship Canal, by way of the Beaver River would be one of the best places in the United States to make a start. It would benefit more people and more States than any equal investment on the part of the Government. It also would be of great benefit in time of war with a first-class power to have our inland waterways connected and in use. France, England, Italy, Germany, Canada, and other nations are developing their waterways on a large scale, and we must do likewise if we would keep abreast of the times.

I thank you very much for your attention, gentlemen.

Mr. CAMPBELL. Mr. Chairman, I would like to have you hear Mr. John E. Shaw of Pittsburgh, as a member of the Lake Erie & Ohio River Ship Canal Board of Pennsylvania.

STATEMENT OF MR. JOHN E. SHAW, PITTSBURGH, PA., REPRESENTING THE LAKE ERIE & OHIO SHIP CANAL BOARD OF PENNSYLVANIA.

Mr. SHAW. Mr. Chairman and gentlemen, I am sending up to you a map that will illustrate somewhat what I am going to say.

In my opinion the present distressing situation of transportation in this country, and which has been the condition since the war, is owing to inadequacy of facilities of transportation. That was demonstrated to us at the breaking out of the war, from the fact that vessels were held in New York Harbor for days and weeks loaded with munitions and other supplies for our own Army and the Allies, because of lack of coal. They could not get it.

You have heard this morning about the Monongahela River having exactly the opposite condition. There is a river that runs from Pittsburgh down into West Virginia, through the coal fields of both States. On the banks of that river are the Pennsylvania, the Lake Erie, and the Baltimore & Ohio Railroads, and yet by having that waterway facility the great plants making 40 per cent of the munitions that we sent to the Allies and our Army were kept on running, because the coal could come there by water. Now, what we propose by the Campbell bill, and which is outlined on your map there, is to install the same condition of affairs as transportation for the whole country.

Now, we ought to learn some lessons. He is wise who learns from those who can teach, and even from the enemy, as Mr. Thompson has illustrated, from Germany. We have been trying in this country to make a three-legged stool stand on one leg when, according to Mr. Thompson's diagram, there are three legs that ought to support a sane policy of transportation for any country; namely, the railroads, the waterways, and the highways. Now, we have been making our development all lopsided, one sided on the railway and neglecting the others, and consequently when the great stress of war came on the whole thing went down and our transportation system fell to pieces.

Now, how are we going to learn these lessons? The war has taught us that we can do big things and we can do it with money and men, and the time has arrived when we have discovered that the weakest point where we were unprepared was our transportation. We should rectify that, do some big thing right now, and that big thing is outlined in the Campbell bill.

Now, just look at that map for a minute. Every place you see a red line there is the ramification of the waterway proposed, the national waterway outlined in the Campbell bill. You will see that there are two outstanding waterways in this country already. The first is the Great Lakes system, that has its outlet through the Erie Barge Canal to New York, and the other outlet through the St. Lawrence River to Montreal. Then there is below that the great river systems composed of the Ohio and the Mississippi Rivers and their tributaries.

We have not designated in red the tributaries that are already navigable, but only the trunk lines that will be coupled up by this system of transportation. You will notice there the arrow which points where the coupling point is by the Lake Erie & Ohio River

Canal. That is the shortest distance between the Ohio River and the lake, and, as Mr. Leaf explained, only 100 miles, 50 miles of canalized rivers, the Beaver and the Mahoning, and only 50 miles of canal to dig along Mosquito Creek, Grand River, and Indian Creek to the lake. Now, what does that do by coupling them up and by improving the waterways that are included in the Campbell bill? Well, from New York up the Hudson, through the Erie Canal and down through this canal [indicating] and through the Ohio River and through the Mississippi River is 2,700 miles. There is an inland waterway from New York to New Orleans, 2,700 miles long, without a break. In that barges may navigate from New York to the Ohio River at Pittsburgh carrying 2,000 to 2,500 tons, and from Pittsburgh to New Orleans up to 1,000 tons. Now, therefore, we have this inland waterway, 2,700 miles long, and then it involves the improvement of the Mississippi clear up to St. Paul and the extension of the drainage canal from Chicago down to the Mississippi River.

There, you see, is an inland belt-line waterway that connects up seven-eighths of the iron and steel industries in this country, and connects for them their ore supplies and their fuel supplies with the service of such a waterway and gives them for their manufactured product access to the ocean at three points—Montreal, New York, and New Orleans.

Now, Mr. Thompson said that our participation in the foreign commerce of the world is going to be fixed by the cheapness of transportation and the adequacy of it, and there can be no economy in transportation unless the routes are open and not congested. We have felt the condition of congestion ever since the war began, stoppage of the railroads, and when they can't move, up go prices of products, labor is dissatisfied, and there is unrest. If we are going to get at the root of this matter we have got to do some big thing like this and open up the whole country by facilities of transportation that will connect the three legs that bear up transportation and let them do their part.

Now, Mr. Chairman, you spoke of the appropriations for the Ohio River. We want to get away from the past. Since the war we are putting past things away. Do you know that the first dam that was built on the Ohio River was built in 1883, 35 years ago, and they have been appropriating and have not got it half done? According to the policy that we have been following of making appropriations annually, it will be 35 years more before we have the Ohio River available; and as a chain is only as strong as its weakest link, it is not of any practical use for our national commerce until the last dam is built. It is like building a bridge out from two sides, from two shores, and building it gradually, but the center arch is not put in and the bridge is no use as a highway for commerce until the entire center arch is put in. Our policy in this bill is to put the center arch right in here in five years.

Mr. DEMPSEY. Now, we admit all this; the only trouble is it doesn't cover all the facts that are brought to our attention. As I say, they had something over \$10,000,000 last November. Now, you can't do work any faster than you can get dredges and outfits with which to do it, and this country is short of dredges at the present time. You can't get new men to go in and compete in the improvement of the Ohio River with those men who are there, on account of the ex-

pense of moving their plant, and the fact that they can get an abundance of work and a great deal more work than there is for them to do right where their plants are. Now, you have to make your arrangements as to the speed with which the work shall be done with reference to the instruments with which you are going to do it.

Mr. SHAW. I agree with you absolutely as to that.

Mr. DEMPSEY. All those things developed before our committee. Now, with the men who are on the work, and who are the only men we can get—using them, using all the plant they have, using all the means that they have with which to do the work, you have got an abundance of money for, I should say, two years. I don't think there is anything that could be done at the present moment, or within a year, say, to expedite the Ohio River work to make it go any faster than it is going. The only way you can expedite work through the country on any of these waterway projects and make it go any faster than the amount which we have appropriated will expedite it is by the building of additional plant. Now, of course, that is a tremendous problem, the building of plant, including dredges, at the present time and at present prices, but we are providing for additional plant. Those things will all develop, and this committee, I want to say for the members, was very diligent in the examination of all of these problems. We held very prolonged hearings and all these gentlemen attended practically every hearing. They were there when we began and they stayed there through the hearings, and the engineering force would say—we would come to a project where we had so many dredges, and the question would be asked, "Can we do so much?" "No; we can only do so much." And that is the situation on the Ohio.

Mr. SHAW. I agree, Mr. Chairman, with your statement of a present condition. Of the present condition it is true, but I hark back to a condition that existed before the war and at the time the Panama Canal was built, when we spent, did we not, \$400,000,000 down there?

Mr. DEMPSEY. Yes.

Mr. SHAW. And I don't think it was over five years in which we spent it. But your statement of the condition at the present time is absolutely true, but we are looking for conditions to be normal when we can get men, and in 1910 we could have gotten the men, when they were walking the streets and hunting jobs, and that is the time when we should have put this into effect and done it quick. If we do it under our present policy, as I pointed out to you, by the present appropriations, it will be 35 years more before we get the relief that we ought to have.

Mr. DEMPSEY. If we have anything to do with it, we are not going to put it off that long; we are going to be ready to do this work as rapidly as it can be done, having regard to the conditions to which I have invited your attention.

Mr. SHAW. What we are pressing this bill for is to create a condition by which we can do this thing, and just as big things as we have done during the war, but do it when the time is opportune. We may be there in two years; some predict that we will, but we want to have the machinery, the authority, backed by the Government, by which we can step in and do it quick, and we don't want to suffer like we suffered during the war, like we are suffering at the present time. Now, it is incalculable to figure out the loss to business and the

suffering through the high prices which this congestion of transportation in our country has brought to us. It is incalculable, and if the Monongahela, with an expenditure of eight millions, could do what it was pointed out to you it did do, and the saving, this is just the same thing on a bigger scale exactly. But I agree with you absolutely; it can not be done while we are in the present condition, but we can get ready.

Mr. DEMPSEY. We can do a certain part of it. We can do what the dredges on hand and what the works on hand will permit us to do.

Mr. SHAW. The idea would be a good one to keep within what we can do at present with the money, but have this machinery to step in and take hold of the whole thing when the time is ripe. That is what we want.

Now, then, you can see the tremendous waterway mileage provided, the extensive coupling up of the States, and furnishing them continuous waterway service with three outlets to tidewater. Why, there are 32 States through which a boat, the smallest boat or up to 1,000 tons can run without changing its cargo. We will admit that at the Lake Erie ports perhaps there will be some transfer there to the big 12,000-ton steamers, but these barges can come from Duluth down to Pittsburgh and through the important points there and bring without change their tonnage.

Now, I just want to give you some idea of the importance of that district. The total tonnage moved between the Ohio River and the lake front in 1914 was estimated by Dean Holdsworth, dean of economics in the University of Pittsburgh, after a year's survey, at 303,261,000 tons moving around Pittsburgh. Of this tonnage bulky commodities amounted to 234,000,000 tons. These figures included all the tonnage moved in the district in which the canal would be situated, but he goes on further and estimates that the bulky tonnage moved between the Ohio River and Lake Erie ports and shipped to and from the latter into or from the canal territory in 1913 was 116,778,000 tons, right along where this canal is going to be built. And the statistics for 1916 show that these figures were increased for that year to about 95,000,000 tons. Now this canal will have locks 600 feet long, 56 feet wide, and 12 feet deep, the same depth as the Erie Canal, but it will carry larger vessels, you see. It will take the Monongahela fleets of coal barges and put them through the canal locks, taking four barges of 1,000 each in each lockage. So, if we have this waterway supplementing the railways, no congestion and breaking down of our transportation service such as we have experienced during the war and since, with its consequent paralysis to commerce and industry could again occur. I have nothing to say against the railways; build them up the very best; they have done great work for our country, but it is impossible to put the railways into condition to handle at least half a billion tons—500,000,000 tons—which this waterway would carry, and relieve the railroads, and it would be impossible to estimate the sum that would have to be spent on the railroads to carry this tonnage.

Mr. CLEARY. You realize that such waterways as the Erie Canal, and perhaps waterways to the West, too, can not compete with the lake vessel on the Lakes?

Mr. SHAW. No, sir.

Mr. CLEARY. They carry it for half the money that a canal boat could. Another thing, a canal boat is not built to cross the Lakes. They couldn't do it. They couldn't stand the storms. The lake boats are great, large vessels, carrying 10,000 to 20,000 tons, you see, and the barges couldn't compete with them. The towing expense and all those things would eat them up. So there are two methods of transportation, the lake itself—from one end of it to the other—and the connecting line. And it is a very low-paying trade—the lowest trade, perhaps, in the world—that goes on the Lakes. That is because of such deep water and such big vessels. So, of course, those rates are such that the smaller boats that run down the rivers and canals can not compete with them. So you have to figure on going to the lake from any direction you come, and transferring on to lake vessels because they can carry it so much cheaper.

Mr. SHAW. It might be for the upper Lakes, but not for Lake Erie.

Mr. CLEARY. Oh, yes; I am entirely familiar with that. They tried that once. They made some lake steamers once. Louis Nixon and some others built some boats to run up to Cleveland, and they made a failure of it. Now, there are great storms in Lake Erie, you must understand. Mr. Dempsey comes from that section, and I have crossed Lake Ontario on a canal boat myself in a storm. We got adrift and we were in a great muss. Those canal boats are unfit for lake traffic. There are storms, even in Lake Ontario, that canal barges are not fit for. The canal barge is necessarily a canal and river vessel. She is built cheap; she is built light; she is built all those things in order to make cheap transportation on rivers or canals. The lake vessels are built much heavier, much bigger, and they are not fit for ocean business either. The great ocean vessel comes in so heavy, and drawing so much water, that she draws pretty near as much water as you have got in Lake Erie. So, when we built the Erie Canal we figured all these things out; we figured that it took three classes of vessels; one was a large barge which is fit for canals and rivers; the other was a like vessel, fit for the Lakes, to carry great cargoes, drawing 20 feet of water—while 20 feet of water in the ocean is no good; our big ocean vessels come in pretty near light at 20 feet, and there you are. It takes three classes of vessels to do the business. That has all been gone over time and again, and all experts that have gone into it agree that in water transportation it takes three classes of vessels—one for the canals and rivers, one for the Lakes, and one for the ocean.

Mr. DEMPSEY. Mr. Thompson stated that as being the experience of Germany, that they transferred from the big ship to the barges.

Mr. SHAW. Well, Mr. Isham Randolph of Chicago—I believe you all know him—he was our consulting engineer of the canal board at Pittsburgh, and he says that vessels can be constructed that will navigate the Erie barge canal, our canal, and the river. Now, it is only a short distance from Ashtabula to Buffalo.

Mr. CLEARY. I understand, but let me tell you the reason they can not. There is not water enough. Now, I own barges that are just fit to go to New Haven and on the Sound and around New York Harbor, that could not successfully navigate the Erie Canal, because they are so heavy. They have great yellow pine timbers in them that draw them down and they draw too much water. They are

made almost for ocean business, you know, in the Sound and around there. Now, we couldn't navigate the Erie Canal with those boats. You need for the canal a boat with as thin sides as you can have, not too much up and down timber, her keelsons, her bottom keelsons, need to be light. She needs to be light constructed, so as to carry a big load and small draft. Then you need for the ocean great vessels that will draw, as I say, nearly 20 feet of water light, built sharp at the bottom; you need for the lakes comparatively lighter boats than for the ocean. That has all been gone over, and whenever anybody tries it they will arrive at the same conclusion.

Mr. SHAW. Our Mr. Randolph and Mr. Stickney and Mr. John P. Newton—Mr. Stickney of the barge canal—they were our consulting engineers also, and they agreed that the type of barge that would probably be most servicable to run from New York to New Orleans and run through the canals, was a 3,000-ton barge, built strong and heavy or a 1,100-ton barge for canal only.

Mr. CLEARY. It can't be done.

Mr. JUTT. Mr. Randolph, of course, is a great engineer and canal builder, but Mr. Cleary, there is a practical canal man and has been for how many years—40 or 50 years?

Mr. CLEARY. I might say, to give you an idea of what can be done by a combination of rates: From New York City to Chicago it is only 1,000 miles by water. I have carried thousands and thousands of tons of stuff by canal and lake for 7½ cents a hundred, which is \$1.40 a ton, from New York to Chicago, and it only cost us to transfer at the lake points about 5 cents a ton, and in the long run we can transfer and save money at a cost of only 5 cents.

Mr. DEMPSEY. At the present time the State of New York has provided for terminals at Tonawanda 3 miles long on each side. The State is going to build terminals there; she is going to acquire the land on each side, 500 feet deep, and we are trying to get the Federal Government at the present time to improve the harbor so that you will have a place to make your transfer, and that is all going to be done at the expense of the State of New York.

Mr. CLEARY. There will never be any vessels cross the lake and run into the other, carrying a thousand tons, while there are boats on the lake carrying ten or fifteen thousand tons.

Mr. SHAW. It is such a short run from Ashtabula up to Buffalo, that the weather man can tell any person making that short run how the weather is going to be.

Mr. CLEARY. The weather varies on the water mighty quick. The other day we lost a barge off Bridgeport that way. The fellow left Bridgeport in a light breeze, and he hadn't gotten 25 miles away when our barges were sunk. Storms come up so quick, and you can't get anywhere with a big tow in a storm. The weather man can't help you any there.

Mr. SHAW. You were speaking about it not being possible to meet the lake rates.

Mr. CLEARY. Yes; it is the lowest transportation in the world.

Mr. SHAW. Well, I want to call your attention to the fact that on the Ohio River, without its being canalized, with flood water, we have carried coal to New Orleans with the big towboats and 1,000-ton barges fleeted together at one-third of 1 mill.

Mr. CLEARY. How much a ton?

50 WATERWAY CONNECTING LAKE ERIE WITH OHIO RIVER.

Mr. SHAW. One-third of 1 mill per ton per mile.

Mr. CLEARY. How much a ton was it for the distance?

Mr. DEMPSEY. What did it cost per ton for the distance?

Mr. SHAW. There was about 50,000 tons in one fleet, and the cost of transportation was one-third of 1 mill per ton per mile.

Mr. DEMPSEY. But what was it for the distance?

Mr. SHAW. It is 1,000 miles from Pittsburgh to Cairo and about 1,000 miles from Cairo to New Orleans. It would be about 73 cents per ton, Pittsburgh to New Orleans.

Mr. CLEARY. About how many miles is that?

Mr. SHAW. Two thousand miles. It has been stated that from Duluth to Ashtabula it is 80 cents.

Mr. CAMPBELL. I would like to have you hear one more witness, Mr. Chairman—Judge Carew, of Youngstown.

Mr. DEMPSEY. We will be very glad, indeed, to hear you, Judge.

STATEMENT OF MR. GEORGE J. CAREW, YOUNGSTOWN, OHIO.

Mr. CAREW. Mr. Chairman and gentlemen, I will try to be brief. I just want to say a word as a constituent, that I appreciate very much the patience with which this committee has listened to these various talks, and I also want to express my humble appreciation of the knowledge of the subject in all various lines that the committee displays.

I have been asked to present the individual proposition of the Lake Erie & Ohio River Canal, and I want to say in starting that we are in hearty sympathy with the Campbell bill in all of its provisions and in everything that has been said about the coordinating of all these various water-way projects. Coming now to the Lake Erie & Ohio River Canal, I want to call your attention to four points with reference to it. Some of these things have been touched upon by the other gentlemen, but, first, the short route. It is 101½ miles from the lake harbor to the junction of the Beaver River and the Ohio River at Beaver Falls and Rochester. Twenty miles of that is in the Beaver River to its junction with the Mahoning. Twenty-nine miles and four-tenths is in the Mahoning River from its junction with the Beaver to Niles, Ohio. Then there is a stretch of 8.4 miles on Mosquito Creek until we get to the summit. I want to call attention to the fact that the summit level is 27 miles long, and then from the north end of the summit level to the lake, is a distance of 15.7 miles, making altogether 101.5 miles.

Mr. DEMPSEY. How much of that will have to be dug and how much of it is natural waterway?

Mr. CAREW. Well, there is more than 60 miles—there is 60 miles of river and Mosquito Creek to the beginning of the summit level, and there is 27 miles of reservoir which would be taken care of by dams, and then there is 15 miles of slope from the north end of the summit level to the lake and there would be digging in there, but it would be supplemented by the valley of Indian Creek. So that there would be very little digging.

Mr. JULL. When you speak of the summit level do you mean that in that entire distance there is no fall where locks would be necessary?

Mr. CAREW. There will be no locks in that 27 miles. That will be a reservoir, which I can show you here [indicating map]. The com-

mittee at their leisure may look over this map. It shows the reservoir here [indicating]. This is the north and south line, and the Beaver is here. It runs up the Mahoning to Niles and Mosquito to the summit level, and this shows the summit level. Then there is the drop of 15 miles to Lake Erie [indicating]. It will probably be modified somewhat, but there is the plan that I have.

Mr. LEA. About what is the elevation of the summit?

Mr. CAREW. The elevation of the summit level is 900 feet above sea level.

Mr. LEA. How much above the lakes?

Mr. CAREW. It is 327 feet above the lake at the summit, and Mr. Patterson tells me it is the same as the Welland Canal. Forty-nine miles of this route from the mouth of the Beaver River to Niles has been declared navigable water by the National Government.

Now, a few details about the canal. It provides for a minimum depth of 12 feet, a minimum width at the bottom of 140 feet, and at the surface of the canal a minimum width of 188 feet.

Mr. JULL. Will you pardon me a question there? When you are gone I would like to understand what you have been telling us. You have some shaded parts here on your map. You have a shaded part here; does that represent coal fields, or what are the shaded parts?

Mr. CAREW. That is the other map; this map?

Mr. JULL. The small map here.

Mr. CAREW. That is a reservoir. I will come to that. These are watersheds [indicating on map].

I might say in passing that there are 26 locks provided for the entire canal from the lake to the mouth of the Beaver River. I am not going into details as to where those are placed. They are placed according to the levels and about one-third of them are on the lake end and the balance are on the south end toward the Ohio River.

Now, a very important matter is the water supply, and that, according to the information that we get from Government engineers, is amply provided for. In the little detail map at the corner of that long piece you will see certain shaded areas, and they go into the watershed of French Creek. As many of you know, there formerly was a canal from Erie to Pittsburgh, and the dams that were available for that purpose are to some extent available still, but the watershed, of course, is still available, and that is two hundred and some odd feet above our summit level. The level of French Creek at Bemustown Dam, which is near Meadville, is something like 1,100 feet and a feeder canal runs at right angles to our main canal westward across Pennsylvania and Ohio, tapping the north side of the Pymatuning Reservoir, upon which, by the way, I understand the State of Pennsylvania is spending some \$22,000,000 as a conservation and reclamation project. We pass the top of that reservoir and the waters of Pymatuning Creek and the reservoir are available as a feeder for this canal, and there is a fall of over 200 feet from Meadville across to our summit level.

The available drainage areas are, in the French Creek above the mouth—I don't read these figures readily, but to make it brief I will say that there are 20,000,000,000 cubic feet of water available for this dam with the storage reservoirs that are already planned.

Now, the details of the reports on water needs show that for a dam with single locks necessary to carry some 38,000,000 tons per year, 8,000,000,000 cubic feet of water is necessary, and for double the capacity with double locks, carrying 76,000,000 tons of freight, 14,000,000,000 cubic feet of water is necessary. These reservoirs are already planned to provide for the storage of 20,000,000,000 cubic feet of water, and I am saying this on my own responsibility but from inquiry among engineers I feel that I am right, that capacity would be available at least three times a year, as the rains of the spring would supply the canal until July, when we would have 20,000,000,000 cubic feet available for the summer, and then they would fill up again in the fall.

Now, another important matter about this canal is the volume of bulk freight. I think it goes without saying that the carrying of bulk freight is an essential, at least it is an important matter in a canal. With the ore figures that have been presented to you, and the coal figures that have been presented to you, we have an abundance of freight for this canal. And another important matter is the two-way haul. We have the ore from the north to the south and we have the coal from the south to the north, providing a load each way. Now, I have it from Mr. Thompson—and no doubt Mr. Cleary is as familiar with that as anyone else—that the tonnage of the Great Lakes is something like 150,000,000 tons annually.

Mr. JUL. You mean all of the tonnage of the Great Lakes?

Mr. CAREW. All of the tonnage of the Great Lakes, 150,000,000 tons. Now, for the purpose of comparison, in 1916 58,000,000 tons of ore went from the Mesaba region to the various lake ports, and 80 per cent of that tonnage went to the harbors that would be naturally tributary to this canal, the harbors of Lorain, Cleveland, Conneaut, Fairport, Ashtabula, and Erie. This 80 per cent will be available for this canal.

Now, just a moment for a few figures here, the figures showing receipt in tons, short tons, of iron ore by ports. In 1889, Ashtabula, 2,199,000; Cleveland, 1,951,564; Conneaut had not been at that time opened; Fairport, 928,616. In 1906, Ashtabula, 7,534,108 tons; Cleveland, 7,461,495 tons; Conneaut, 6,061,615 tons; Fairport, 2,052,538 tons. In 1916, Ashtabula, 12,828,167 tons; Cleveland, 12,289,920 tons; Conneaut, 11,084,463 tons; Fairport, 3,099,579 tons. In 1916 the total was 39,302,129 tons.

Now, the coal shipments from these ports, without going into the details—

Mr. JUL. (interposing). Now, in this tonnage statement you are making, these ports act as receivers, practically, for some great inland steel center. What inland steel center took all that, or was it melted and handled right there, or what percentage did Pittsburgh take?

Mr. CAREW. I haven't the figures on Pittsburgh.

Mr. JUL. Well, these ports were really receiving ports.

Mr. CAREW. They are receiving ports, as you say. Mr. Patterson tells me about 80 per cent of those receipts went to Pittsburgh.

Mr. PATTERSON. Pittsburgh, Youngstown, and Wheeling.

Mr. CAREW. Eighty per cent went to the Pittsburgh district.

Mr. JUL. And what per cent was converted at the receiving port?

Mr. CAREW. A very small part, perhaps, was converted in the receiving ports.

Mr. JUL. Is there any natural explanation for the fact that the conversion does not take place at the receiving port?

Mr. CAREW. Yes; there are several explanations. The first is the personality of the men who run the furnaces, the men who have that particular art. Second is the local pride of the men who have devoted their years and energies and capital right where the business has developed.

Mr. CLEARY. Isn't it a fact that most of it is ore that simply passes through these places on the way to Pittsburgh, and so on?

Mr. CAREW. Yes, sir.

Mr. CLEARY. Just as ore?

Mr. CAREW. Yes, sir; and the third, and what might be considered the most important one, is that at those places you find the coal. In Pittsburgh that is true.

Mr. DEMPSEY. In other words, you have either got to take the ore to the coal or take the coal to the ore?

Mr. CAREW. Yes, sir.

Mr. J. FRANK TILLEY. It takes 2 tons of coal to 1 ton of ore. That is the reason.

Mr. DEMPSEY. So it is cheaper to transport the ore?

Mr. J. FRANK TILLEY. Yes, sir.

Mr. DEMPSEY. When we have developed all the power there at Niagara Falls that we ought to develop, that will help relieve the coal situation?

Mr. J. FRANK TILLEY. Yes.

Mr. CAREW. Well, I might say, as a matter of interest, that Youngstown has neither coal nor ore, but she has been making very rapid strides; and one reason for it is that we have the men and the development, and the profits that have come from the development have been turned right back into the business there, and Youngstown has been growing rapidly during all these years, although her coal supplies must come from the Pittsburgh district and her iron ore must come from the Lake regions.

Mr. DEMPSEY. What is the population of Youngstown now?

Mr. CAREW. Our population—we will know to-morrow morning at 10 o'clock. It has not been released. It is something in the neighborhood of 140,000. [Census shows 132,000.]

Mr. JUL. It has increased 50 per cent in 10 years?

Mr. CAREW. It has doubled, practically, from 79,000 in 1910.

I have spoken about the two-way bulk freight. I think, with the experience of you gentlemen, I need not go into that further.

Another matter that I find here is simple terminal arrangements. The bulk freight that we carry will be distributed to plants that are located right on the river, where there is ample room for terminal facilities and which, for the most part, will be put in by the companies themselves.

Now, there are one or two other matters that I want to speak about, perhaps to supplement what has been said by some of the others. I understand that Gen. Beach said at a public meeting a short time ago, so I am at liberty to speak about it, that if the railroads had the resources to secure all they needed in equipment and

extensions it would take six years for them to catch up with their present needs.

Adverting again to a statement which was made by one of the other speakers that canal transportation might take care of at least 500,000,000 tons of transportation, this particular canal will take care of from fifty to seventy-five million tons annually. So you can see the importance of this connecting link. Now, you gentlemen are familiar with the importance of Lake Erie as a means of transportation; you are familiar with the Ohio River as a means of transportation; and it needs no argument to show the importance of connecting up those two systems by the shortest route in the whole country.

Another thing, I want to say that this particular region is the greatest bulk-freight region in the world. I think that needs no argument. It is generally recognized. I make that statement, and if you need anything further on that it can be found.

I am trying to remember a statement that was made by Mr. Hoover on April 12 in one of our publications in which he spoke about the entire gross tonnage in comparing prices and production. It runs in my mind that it was something like 1,000,000,000 tons. I may be mistaken about that, but that is a matter that can be checked up.

I believe there is nothing further for me to say except this: The difference in cost between railroad transportation and river transportation has been called to your attention in the transportation of coal on the Monongahela River, where the railroad transportation was said to be 40 cents, while the river transportation was 9 cents per ton. We have just gone through two or three weeks of idleness in our valley, at a loss of hundreds of thousands of dollars in wages every day, because the railroad strike, the terminal strike, has made it absolutely impossible for us to get coal. At the same time the La Belle Iron Works, located at Steubenville, has not lost a day, because they have had the benefit of river transportation.

In our valley, in the city of Youngstown, we have over \$326,000,000 invested in the steel business. Our wages expended in the steel manufactured last year were \$85,000,000. The coal and ore and coke used was as follows: Coke, 1,555,404 tons; coal, 5,703,919 tons; ore, 5,317,637 tons. A total of 12,576,970 tons, besides the limestone used.

Mr. DEMPSEY. The raw material was 12,000,000?

Mr. CAREW. The tonnage I have does not include the limestone used.

Another important proposition is this: That the fabricated products can be taken out in a large measure in the canal just the same as the raw materials coming in, and in addition to that we have the new Warren district, which this year will use at least 5,000,000 tons of ore and coal, and I have a couple of graphs here which with your permission—two or three of them—I will leave with you. These graphs show the ore freight coming down the lake and the coal freight going up the lakes. Then we have a graph here showing the tonnage of coal and coke in the Mahoning Valley since 1910, and an estimate, which I consider very conservative, for 1925, because the graph line extends very little beyond the present line.

Mr. DEMPSEY. You can file those with the secretary of the committee, and these maps as well. We will be very glad to have them.

Mr. JUUL. I just want to take a fraction of a minute to ask these gentlemen one question here. You aim to connect up Pittsburgh, Youngstown, and other cities with Lake Erie with what depth of canal?

Mr. CAREW. A 12-foot canal at the present time.

Mr. JUUL. And what is the estimated cost of this transaction?

Mr. CAREW. The estimated cost in 1915 was \$65,000,000. We realize at the present time it will be more than that. The figures that I have had on it are \$90,000,000 to \$100,000,000.

Mr. JUUL. And the distance is what?

Mr. CAREW. 101½ miles.

Mr. DEMPSEY. We are very glad to have seen and heard all you gentlemen. We will now adjourn.

(Whereupon, at 4 o'clock p. m., the committee adjourned.)

MSH 21900

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TITLE**